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The Expectation Gap Standards: *Progress, Implementation Issues, and Research Opportunities*

The Expectation Gap Standards

- ***Progress***
- ***Implementation Issues***
- ***Research Opportunities***

Proceedings of the
Expectation Gap Roundtable
May 11–12, 1992
Charleston, SC

The

Expectation Gap Standards

- ***Progress***
- ***Implementation Issues***
- ***Research Opportunities***

Sponsored by:

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Preface

In April 1988, the AICPA's Auditing Standards Board (ASB) issued nine Statements on Auditing Standards (SASs). These standards address what has become known as the *expectation gap*—the difference between what the public and financial statement users believe auditors are responsible for and what auditors themselves believe their responsibilities are.

The expectation gap SASs ushered in significant changes in some fundamental and long-standing auditors' responsibilities and audit requirements. Specifically, these SASs were intended to (1) increase the auditor's responsibility to detect and report errors, irregularities, and illegal acts; (2) improve audit effectiveness; and (3) improve auditor communications with both financial statement users and those within an entity who are responsible for financial reporting.

Members of the ASB and the AICPA's Auditing Standards Division recognized that SASs creating such significant and pervasive changes would require periodic analysis and assessment to evaluate their implementation and identify additional actions that might be necessary. Thus, on May 11 and 12, 1992, in Charleston, South Carolina, a conference was held to review the progress of the expectation gap SASs. The specific conference objectives were to—

- Examine implementation of the expectation gap standards from the perspective of practitioners and users of audit services to identify accomplishments and needs.
- Identify emerging expectation gap issues.
- Stimulate research directly related to (1) the expectation gap SASs, (2) issues that the ASB is currently considering, and (3) issues that the ASB will be considering in the near future.
- Provide, through publication of the conference proceedings, materials to enhance the quality of audit education.

The core of the conference was a series of commissioned research papers prepared by leading academics that address specific expectation gap SASs (see the table of contents). Each paper summarizes relevant research concerning a specific standard or standards and reviews application of the standard(s) in practice. Some authors conducted research pertinent to the standard(s) specifically for the conference and reported the results.

The papers and related issues were discussed by the participants who represented a broad variety of perspectives including auditing standard

setters; national, regional, and local public accounting firms; the academic community; financial executives, internal auditors, regulators, and international auditing groups.

The conference proceedings identified a number of areas where the objectives of the expectation gap standards had been accomplished, as well as a number of areas on which additional efforts should be focused. In a few areas, sufficient time had not elapsed to provide an adequate data base for research. After the conference, the ASB's Audit Issues Task Force reviewed each paper and related conference discussion and, where warranted, referred matters to the ASB or an appropriate ASB task force.

We are grateful to the conference sponsors who made this progress report on the expectation gap SASs possible. Without their moral and financial support, the conference would never have been more than another good idea. We particularly want to acknowledge the commitment and efforts of the authors of each paper. The extraordinary quality of the conference papers demonstrates the talent and hard work of the authors and serves as testimony that academic research can address audit policy and practice subjects in a substantive and timely manner. We deeply appreciate the authors' efforts.

We also owe special thanks to those who helped organize and conduct the conference. Don Neebes of Ernst & Young sparked the idea for the conference and created the sponsorship group. Ray Whittington of San Diego State University and Gary Holstrum of the University of South Florida commissioned the research papers, worked closely with the authors as they prepared them, and spent many hours editing the papers for these proceedings. Jeanne Mebus-Summo, Technical Manager in the Auditing Standards Division, ably carried out the innumerable administrative duties associated with a conference of this size and devoted considerable time and effort to the editorial tasks involved in the publication of these proceedings.

We sincerely appreciate the contributions of the conference participants. Their comments, insights, and viewpoints stimulated thoughtful, objective analysis of the progress of the expectation gap standards. Without their dedication, the conference could not have accomplished its objectives.

Additional research on the implementation of the expectation gap SASs is sorely needed. We believe the proceedings of this conference will provide both stimulation and valuable perspective to those who are interested in conducting such research. In addition, we believe that these papers provide unique, informative, and readable educational materials for students of accounting and auditing. Through the generosity of the sponsors, complimentary copies of these proceedings have been made available to each member of the Auditing Section of the American Accounting Association and to the head of the accounting program at virtually every college and

university in the United States. We hope that the widespread distribution of these proceedings will foster continued analysis, dialogue, and research about the expectation gap SASs.

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The New Audit Report: User Perceptions and Implementation Issues

Henry R. Jaenicke, *C.D. Clarkson Professor of Accounting, Drexel University*
Arnold Wright, *Arthur Andersen Professor, Boston College*

SAS No. 58 revised the previous audit report that had been in existence for more than forty years. This paper identifies the primary objectives of SAS No. 58 and reviews the research findings since its issuance to evaluate the extent to which these objectives appear to have been accomplished. Additionally, implementation issues of SAS No. 58 are discussed based on interviews with national office partners and staff. Finally, the implications of the findings for standard setting and future research are considered.

The research results suggest that the new report has clarified the respective roles of the auditor and management. However, the audit process is still perceived as unclear, and the role of reasonable assurance, GAAP, and selective audit testing are not fully recognized and/or accepted by users. Future research is needed to consider the most cost-effective means of communicating intended auditor messages as well as identifying evolving issues posing a potential expectation gap between users and auditors. Implementation matters include choosing the appropriate opinion in situations involving scope limitations, uncertainties, and GAAP issues; other reporting issues; and providing additional information in the standard report.

Introduction

SAS No. 58, *Reports on Audited Financial Statements* (AICPA, *Professional Standards*, vol. 1, AU sec. 508), prescribed a new form of the auditor's standard report. The most significant changes from the previous report were the addition of (1) an introductory paragraph differentiating management's and the auditor's responsibilities, (2) language that explicitly

acknowledged that an audit provides reasonable assurance about whether the financial statements are free from material misstatements, and (3) a brief explanation of what an audit entails. The objective of the changes was to improve user understanding of the auditor's role by requiring that the standard report explicitly address the responsibility the auditor assumes, the procedures the auditor performs, and the assurance the auditor provides. This paper has three purposes—

1. To summarize the research findings to date regarding the extent to which the new auditor's report has achieved its objectives.
2. To identify problems that practitioners may have in implementing the new report.
3. To suggest ideas for future research in areas related to the auditor's standard report.

We do not consider the treatment of consistency and uncertainty matters as addressed in SAS No. 58, since these issues are examined in separate reports prepared for the Expectation GAP Roundtable.[1]

Research Findings

This section contains a review of the findings of research studies examining the impact of the new report on the perceptions of various financial statement users, auditors, and accounting faculty. Although there have been a number of prior studies concerning the effect of various attestation reports, the focus here is on research specifically addressing SAS No. 58. Thus, the work is quite recent and includes both published and unpublished studies. The review is organized by broad issues that are addressed by SAS No. 58.

Responsibilities of Management and Auditors

As discussed earlier, one of the objectives of SAS No. 58 was to delineate more clearly the responsibilities of management and the auditor. Therefore, the revised report explicitly recognizes that the financial statements are the responsibility of management, whereas the role of the auditor is to express an independent opinion on these representations. Since the issuance of SAS No. 58, a number of research studies have compared user perceptions of the new and old audit reports to examine whether the report changes have altered the message conveyed.

[1] Choosing the appropriate report in the face of possible uncertainties is, however, addressed in this paper.

Kelly and Mohrweis (1989) provided a group of bankers and investors with either the old or the new audit report and asked for their perceptions on nine questions regarding areas of concern that prompted the issuance of SAS No. 58. The new audit report was found to communicate more clearly the responsibilities of management and the purpose of the audit to both user groups. However, the slight changes in the new report to emphasize the *independent* auditor's report and the assertion that the financial statements are *audited* (as compared with "examined" as previously expressed) had no significant impact on views regarding the objectivity of auditors or that an audit had ocurred. Corroborating evidence is provided by Geiger (1991), who conducted a mail survey of banker decisions and perceptions in the context of a loan application accompanied by the SAS No. 58 or the old audit report.[2] The level of confidence expressed in the auditor's independence was not significantly different across report formats.

In a national survey of bankers, Miller, Reed, and Strawser (1990, 1991) also found that the new audit report increased awareness of management's responsibilities and the role of the audit. Hermanson, Duncan, and Carcello (1991) sent a survey to members of the American Association of Individual Investors. Eleven questions were presented in which there were "correct" answers in terms of the message intended by the auditing profession; of interest was the percentage of respondents providing the appropriate answer upon receiving either the old or the new audit report. Participants receiving the new audit report had a significantly greater percentage of correct answers in evaluating the primary responsibilities of management and the auditor than those receiving the old report.

Zachry (1991) surveyed the views of auditing practitioners and professors as to whether changes in the audit report would improve user understanding. There was general agreement between the two groups. Respondents believed users did not understand the old report and perceived that the new report would improve overall understandability as well as clarify the role of the audit. Beckman and Green (1991) and Beckman, Volk, and Davies (1990) report the results of a study of student perceptions (surrogates for investors) regarding the new and old audit reports. The findings revealed the belief that the new report more clearly defines management and auditor responsibilities.

Hatherly, Innes, and Brown (1991) examined the views of MBA students in evaluating the current U.K. audit report or an expanded report analogous to the SAS No. 58 opinion. (Participants also received a full set of financial statements.) The findings revealed that those provided with the expanded report perceived the purpose of the audit to be clearer; a higher level of auditor independence; and management's responsibilities more accurately than those receiving the usual, short U.K. report. However, the current

[2] Other opinion formats were also examined for a change in accounting method.

U.K. audit report is not the same as the U.S. pre-SAS No. 58 report; thus, the results are not directly comparable with other research studies reported.

In summary, the research to date provides consistent results indicating that the new audit report clarifies that the financial statements are representations by management. The role of the auditor in providing an independent opinion is also more clearly communicated. Therefore, the primary objectives of the changes to the first paragraph of the new report appear to have been accomplished.

Scope of the Audit Engagement

A major objective of SAS No. 58 was to clarify the nature of the audit process and its limitations. Hermanson, Duncan, and Carcello (1991) found that investors recognize more accurately the concept of "reasonable assurance" with the new audit report, but there were no differences concerning the notions of GAAS and less than 100 percent testing. Only about half of the respondents realized the need for selective testing in an audit. In addition, those receiving the new report were *less likely* to realize that the opinion typically relates to more than one year.

Kelly and Mohrweis (1989) reported that bankers and investors perceived that the new report delineates more clearly audit procedures than the prior report. Even with the new report, however, users did not feel that audit procedures were clearly defined, indicating on average a response of "undecided" when asked to evaluate the clarity of procedures employed. There were no differences in views concerning the level of auditor and management responsibility to detect and correct material errors in the two audit reports, which appears to be what was desired by the Auditing Standards Board (ASB). The new opinion did not attempt to alter the level of auditor responsibilities, but rather to clarify the audit process. Miller, Reed, and Strawser (1991) also note that the audit report did not affect the perceptions of bankers regarding the scope of the audit.

Hatherly, Innes, and Brown (1991) indicate that MBA students did not perceive differences in the extent of audit work performed under the new report but did believe there was a greater degree of judgment in selecting audit procedures. Audit practitioners and faculty perceived that the SAS No. 58 opinion would improve user understanding of the audit process through acknowledgment of reasonable assurance and elaboration of the scope of the audit (Zachry 1991).

The research findings suggest that the new audit report has clarified the nature of the audit without altering the perceived extent of the work. The apparent lack of recognition by some users of auditor use of selective testing and responsibilities for comparative financial statements, however, indicate potential areas where communication of the audit process could be improved.

Assurance Provided by the Audit Report

SAS No. 58 altered the opinion paragraph by adding the provision that the financial statements are fairly presented *"in all material respects."* This modification attempts to communicate more clearly that an audit opinion is subject to a materiality threshold. The new report, as noted earlier, intended to improve audit communications regarding assurances provided through the opinion without altering the perceived level of auditor liability and responsibility.

Hermanson, Duncan, and Carcello (1991) reported that investors perceived more accurately that the audited statements are free of material error with the new report but were less accurate in recognizing that the financial statements are based on generally accepted accounting principles (GAAP). In contrast, Geiger (1991) found no differences between banker perceptions under the new and old reports regarding the level of confidence that GAAP had been followed and that the financial statements were free of material unintentional and intentional errors. More important, loan decisions were not affected by the report format. Kelly and Mohrweis (1989) indicate users are marginally more accurate with the new audit report in properly concluding that the financial statements are not 100 percent accurate.

In an experimental study, Anderson, Maletta, and Wright (1992) provided a fraud and a bankruptcy case to auditors and judges. The materiality level of an alleged misstatement in the financial statements was varied as either marginally material or highly material. Attributions by judges of auditor responsibility were not different across the two levels of materiality, whereas auditors, as expected, assigned greater responsibility in the bankruptcy case when materiality was at a high level. These findings suggest that judges may not recognize or accept the importance of materiality in assessing auditor negligence for a business failure proceeding. In the fraud case both auditors and judges concurred that the usual level of materiality (e.g., 5 percent of pretax income) does not apply and a greater level of precision is expected of auditors. Thus, the research findings are mixed and not very strong regarding whether changes to the opinion paragraph had any substantive effect on user perceptions regarding materiality or compliance with GAAP.

Kneer, Reckers, and Jennings (1992) examined whether the new audit report would alter perceived auditor legal liability in an alleged audit failure involving a management fraud. Investors participated in an experiment and randomly received either the new or old audit reports. Furthermore, red flags suggesting fraud were present or absent in the case used in the experiment. The results indicated that participants receiving the new audit report believed the auditor was less liable than those provided with the old report. Investors were sensitive to the existence of red flags and attributed greater liability to the auditor when such factors were present. However, perceived

liability was lower for the SAS No. 58 report under both the red flag and the no red flag conditions.

Kneer, Reckers, and Jennings (1992) also asked participants their views on three matters relating to the new audit report: (1) management responsibility for the financial statements, (2) audit sampling, and (3) auditor responsibility for fraud. Corroborating the research discussed earlier, they found that investors attributed greater responsibility to management for the financial statements under the SAS No. 58 report than the previous report. However, no differences in views were present between the reports concerning the extent of sampling and auditor responsibilities to search for fraud. Investors strongly agreed that auditors cannot look at every transaction and are responsible for actively searching for fraud.

Kelly and Mohrweis (1989) found that the investors sampled believed there was no change in the level of auditor responsibility under the old and new reports. Bankers, however, perceived lower auditor responsibility with the new report. Critics had contended that the revised report was an attempt by the profession to lessen perceived auditor liabilities, which the ASB denied. The findings of Kneer, Reckers, and Jennings (1992) and Kelly and Mohrweis (1989), however, suggest that the revised report may be viewed as a reduction in auditor responsibilities.

In examining this issue, Niles and Young (1991) argue that "responsibility" and "liability" (legal) are not equivalent and unidimensional, as assumed in prior research studies. They developed eight responsibility and liability constructs from a review of the auditing literature and then used these measures to examine whether perceptions vary with the old audit report, the 1980 proposed report, or the SAS No. 58 report.[3] MBA students with an average of seven years of work experience participated in the experiment, serving as surrogates for investors. The findings indicated that respondents did perceive differences between auditor and management responsibilities and liabilities, but beliefs did not vary significantly across the three audit report formats. Furthermore, reponsibility and liability were found to be multidimensional. For example, responsibility may encompass factors such as discovery of illegal acts or the design/implementation of the control structure. The lack of support in this study for a shift in views regarding management responsibility with the new audit report is contrary to the other studies cited earlier and may be attributable to the different method or user group employed. Niles and Young suggest that a careful study is needed of the intended messages to be conveyed by the audit report along with research as to the most effective means of communicating these messages.

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[3] In addition, Niles and Young investigated the effect of the presence of a management report on user perceptions. They found that such a report fails to alter perceived auditor or management responsibilities and liabilities.

In a survey of New York and American Stock Exchange shareholders, Epstein (1992) solicited views on the usefulness and clarity of the auditor's report as well as the desired level of auditor assurance. In 1973, a similar survey was conducted by Epstein, providing the opportunity to examine changes in perceptions from the prior report to those of the SAS No. 58 report. A greater percentage of respondents felt that the new auditors' report was "somewhat useful" for investment decisions (30 percent) than the previous one (13 percent).

The survey also examined shareholder views regarding the current desired level of auditor assurance. Despite explicit recognition in the SAS No. 58 report of the concept of reasonable assurance, 47 percent indicated the auditor should provide absolute assurance that the financial statements are free from material errors (51 percent responded reasonable assurance was appropriate). These findings suggest that the notion of reasonable assurance is still not widely accepted or understood by shareholders. A very high level of auditor assurance was expected with regard to the detection of material misstatements resulting from fraud, with 71 percent of the participants expecting absolute auditor assurance and 26 percent reasonable assurance.

Miller, Reed, and Strawser (1991) found that bankers perceived the reliability of the financial statements and the likelihood that fraud would be detected by the auditor to be similar with the old and new audit reports. In comparing the U.K. audit report with the SAS No. 58 report, Hatherly, Innes, and Brown (1991) noted that the expanded report had the ability to influence user perceptions in several factors directly addressed by the revised report such as management responsibility for the financial statements. However, the report also had "spill over" effects in altering views on factors not intended. Specifically, users indicated greater confidence with the SAS No. 58 report that the company is free of fraud, the auditor is satisfied with the financial statements, and the audit adds credibility. They caution that the new report, although reducing differences in views between users and the profession in some areas, may actually widen the expectation gap in others. Miller, Reed, and Strawser, therefore, suggested that the report should specifically mention these other important dimensions.

Bankers and auditors participated in a study by Houghton and Messier (1990), which compared the interpreted meaning of various audit reports, including the previous unqualified report and the one suggested in the ASB Exposure Draft for SAS No. 58. The findings indicated that the proposed wording for the new report eliminated significant differences in meaning present in the earlier report and, thus, resulted in greater "shared meaning" of communications. Houghton and Messier, however, noted that although fewer differences in meaning occurred, this is not to say that the bankers sampled were satisfied with the *quality* of the audit report message (e.g., whether additional information was desired).

In summary, the research results are conflicting regarding the success of the revised audit report in clarifying auditor assurances. Two studies suggest that the explicit recognition of materiality has enhanced user appreciation of this limitation, whereas two other studies revealed no difference. Auditor responsibilities for detecting fraud were not perceived as greater in two studies, and increased expectations were found in another comparing the U.K. report with the SAS No. 58 report. Research regarding perceived auditor legal liabilities under the prior and new reports is very limited (two studies), with conflicting findings. Finally, the level of overall auditor responsibility as reflected in the opinion was not perceived by investors to have changed but, by bankers, to be lower.

Implementing the New Auditor's Report

The following discussion considers problems or issues related to implementing SAS No. 58 in several areas:

- Situations involving scope limitations
- Situations involving uncertainties and other matters
- Situations involving GAAP issues
- Other reporting issues
- Expanding the information content of the standard report

National office partners and their staffs from the six largest accounting firms provided most of the specific implementation problems and issues.

Choosing the Appropriate Opinion in Situations Involving Scope Limitations

Client-Imposed Scope Limitations. Paragraph 42[4] states that when significant scope restrictions are imposed by the client, "ordinarily, the auditor should disclaim an opinion." Should the requirement to disclaim be made absolute?

Audit of Balance Sheet and Review of Income and Cash Flow Statements. (1) May an auditor be engaged to perform an audit of the balance sheet but only a review of the statements of operations and cash flows? The authoritative literature does not address this situation, which may occur in a first-year audit of a previously unaudited entity. (2) If yes, what is the appropriate form of reporting? May the auditor present two separate reports (or a single, multilevel report) indicating the nature of the engagement?

[4] Unless otherwise stated, all paragraph references in this paper are to SAS No. 58.

(3) Should the response be different if the beginning and ending balance sheets have been audited and the intervening statements of operations and cash flows have been reviewed, or might readers be confused by such an opinion?

Disclaiming on Only Part of the Financial Statements. A new client made a change in accounting principle for which a cumulative effect adjustment was appropriate. The lack of detailed accounting records to support the beginning balance and the unavailability of the prior auditor's working papers prevented the client from being able to determine whether the beginning balance had been calculated correctly. Accordingly, the effect of the change on current operations could not be determined. (1) May the auditor conclude that this situation represents a scope limitation not imposed by the client? (2) Paragraphs 47 and 48 address limited reporting engagements (balance sheet only), but do not address the situation in which a complete set of financial statements is presented and must be reported on. The second example in paragraph 76, however, implicitly suggests that the appropriate way to report in that situation is to disclaim on the income statement and statement of cash flows. Should the reporting guidance in this situation be made more explicit?

GAAP Exceptions Accompanied by Scope Limitations. SAS No. 58 does not provide examples of the form of opinion to be used when there are scope limitations (requiring either a qualified opinion or a disclaimer) and GAAP departures (requiring either a qualified or an adverse opinion). (This situation seems to afflict thrift institutions particularly.) Should such guidance be provided?

Prior-Year Scope Disclaimer/Current-Year Clean Opinion. Paragraph 72 requires that the introductory paragraph begin, "We were engaged to audit. . ." when there is a scope disclaimer. Paragraph 76 provides examples of reporting language when there are different reports on comparative financial statements presented, but does not provide an example of a report when audited current period financial statements are presented with prior period financial statements on which a disclaimer of opinion has been expressed because of a scope limitation. Should guidance be provided for this situation?

Effect of Prior-Year Scope Limitation Removed by Subsequent Evidential Matter. When comparative financial statements are presented and the prior-year statements were qualified because of a scope limitation (perhaps from the inability to confirm a specific receivable) evidence obtained in the current year (such as the collection of the receivable) could permit the auditor to issue a clean opinion on the current-year statement of operations and cash flows. SAS No. 58 provides no guidance as to whether

the prior-year scope qualification could be removed in the current-year opinion related to the comparative financial statements. Should such guidance be provided?

Choosing the Appropriate Opinion in Situations Involving Uncertainties

Distinguishing Explanatory Paragraphs for Uncertainties From Emphasis-of-a-Matter Paragraphs. Paragraph 37 provides for a voluntary emphasis-of-a-matter paragraph, and provides some examples of when it might be appropriate: (1) Some practitioners find the provision to be awkward and sometimes confusing, which may result in different standards being applied by individual auditors. It may also serve to discourage emphasis-of-a-matter paragraphs. Also, the examples in paragraph 37 consist entirely of factual matters. Some practitioners apparently include comments that make the explanatory paragraph begin to look like an uncertainty paragraph. Is further guidance needed on when to use an emphasis-of-a-matter paragraph and on distinguishing its contents from that of an uncertainty paragraph? (2) The awkwardness and confusion referred to above may be particularly acute in the case of environmental liabilities and development-stage companies. The SEC has also expressed concern over the use of emphasis-of-a-matter paragraphs. In addition, the absence of guidance on where an emphasis-of-a-matter paragraph should be placed is an issue. A discussion of this question follows.

Distinguishing Scope Limitations From Uncertainties. The meaning of the phrase "by circumstances" in paragraph 40 creates the need to determine whether the absence of evidence is the result of a scope restriction or of an uncertainty. Is the unavailability of evidence a "circumstance"? Does it make a difference if evidence does not exist, on the one hand, or if it exists but cannot be obtained, on the other hand? Jaenicke and Glazer (1991) analyzed the guidance provided with respect to reports on investment companies and broker dealers as set forth in AICPA Statement of Position (SOP) Nos. 89-1 and 89-2 and concluded that if museums were required by GAAP to recognize their art collections using fair values, an estimate of fair value by museum employees, unsupported by specialists, unrelated to the museum, would lead to the addition of an explanatory paragraph to the auditor's report because of an uncertainty. An "editors' note" inserted in the Jaenicke and Glazer article stated: "The editors believe that it would be desirable for the auditing standards division of the AICPA to take a position on the circumstances in which this analogy is appropriate. For example, is the analogy appropriate only when there is no qualified third-party appraiser?"

Language for Uncertainty Disclaimers. Paragraphs 70 to 72 provide an example of a disclaimer of opinion resulting from a scope limitation. Should a similar example be provided for a disclaimer resulting from an uncertainty, as provided for in footnote 11 to paragraph 13?

Choosing the Appropriate Opinion in Situations Involving GAAP Issues

Reporting When Pro Forma Financial Information Is Used to Disclose a Subsequent Event. AICPA, *Professional Standards* (vol. 1, AU sec. 560.05) notes that occasionally a subsequent event may be so significant that disclosure can best be made by supplementing the historical financial statements with pro forma financial data giving effect to the event as if it had occurred on the date of the balance sheet. In some cases, the pro forma information is an integral part of the disclosure of the event. Paragraph 46 of SAS No. 58 notes that if these disclosures are not necessary for fair presentation, they may be identified as "unaudited" or "not covered by the auditor's report." SAS No. 58, however, does not address auditor reporting when the pro forma information is both integral to disclosure of the subsequent event and presented in columnar form on the face of the historical statements: (1) Should such guidance be added to SAS No. 58? (2) Might this be an example where an emphasis-of-a-matter paragraph describing the event and the purpose of the pro forma information would be useful?

Reporting on Parent Company Separate Statements. For regulatory or other reasons, the stand-alone financial statements of a parent company are sometimes required to be audited separately. Normally, these stand-alone financial statements would reflect a parent's investment in its subsidiaries using the equity method of accounting. The separate financial statements may or may not be included with or as a part of the consolidated (i.e., general purpose) financial statements. In other circumstances, if investments in subsidiaries that should be consolidated are accounted for under the equity method, the statements would not be in conformity with GAAP. AICPA *Technical Practice Aids* (section 9410.05) indicates that a qualified opinion would be required in this situation unless the parent company's financial statements are included with, or as part of, the general purpose financial statements: (1) Could an unqualified opinion also be expressed on the parent company's statements if the general purpose consolidated financial statements are issued and readily available, although they are not presented with the parent company stand-alone statements? (2) If so, should the auditor's report contain an explanatory paragraph identifying the special purpose for which the parent company's financial statements are prepared and refer to the coexisting consolidated financial statements of the reporting entity?

Liquidation Basis of Accounting. Should the authoritative literature provide guidance on whether a liquidation basis of accounting is GAAP or OCBOA (other comprehensive basis of accounting)?

Reporting When the Financial Statements Are Prepared Using Foreign GAAP or International Accounting Standards. In the United States, there appears to be a growing demand for financial statements that are prepared in conformity with another country's GAAP and/or International Accounting Standards. Under present GAAS, a U.S. auditor may follow SAS No. 51, *Reporting on Financial Statements Prepared for Use in Other Countries*, and use the U.S. standard form of report modified as appropriate because of departures from accounting principles generally accepted in the United States. Alternatively, it would appear that the non-U.S. GAAP could be treated as another comprehensive basis of accounting and the U.S. auditor could issue a special report under SAS No. 62, *Special Reports*. Neither choice is attractive to issuers. Should SAS No. 58 be amended to permit the issuance of a standard, unmodified report on financial statements prepared in conformity with International Accounting Standards or the GAAP of a foreign country or group of foreign countries?

Other Reporting Issues

Distinguishing a Financial Statement Audit From an Examination of a Forecast. Accounting estimates are often based on assumptions about future events and circumstances, such as future cash flows from real estate investments or future taxable income. Sometimes those estimates require an auditor to evaluate evidence about the likelihood of income much further in the future than would be permitted by the authoritative guidance on reporting on prospective financial statements. For example, paragraph 225 of Statement of Financial Accounting Standards No. 109, *Accounting for Income Taxes*, permits an enterprise to project the existence of taxable income as much as fifteen years in the future as a basis for eliminating the need for a deferred income tax valuation allowance, whereas paragraph 45 of SOP No. 92-2, *Questions and Answers on the Term* Reasonably Objective Basis *and Other Issues Affecting Prospective Financial Information*, states that "it ordinarily would be difficult to establish that a reasonably objective basis exists for a financial forecast extending beyond three to five years. . . ." Some practitioners believe that the line that separates an audit of financial statements from an examination of a forecast is becoming blurred. This could become more significant in the future if the auditor is asked to report on new forms of information, particularly forward-looking and other softer kinds of information such as is being considered by the AICPA's special committee on financial reporting: (1) Should the standard report be more explicit than it is now about the "softness" of some of the estimates

in the financial statements? (2) Would additional disclosures in the notes about the softness of accounting estimates be an alternative to explicit auditor reporting about the softness of estimates? (3) Should auditor reporting on "soft" or forward-looking information embedded in accounting estimates be as an emphasis-of-a-matter paragraph or as an uncertainty modification?

Reissuances. Some practitioners believe that the guidance in SAS No. 58 is limited with respect to reissuance of reports within the current period (e.g., treatment for the addition or resolution of uncertainties and change of opinion as a result of a subsequent event). Is additional guidance needed?

Location of an Emphasis-of-a-Matter Paragraph. There is no guidance as to whether a voluntary emphasis-of-a-matter paragraph should precede or follow the opinion paragraph. An emphasis-of-a-matter paragraph added after the opinion paragraph to disclose the loss of a major customer after year end, for example, might lead users to assume that the paragraph raised a question about an uncertainty or perhaps even about the entity's ability to continue as a going concern. Is more specific guidance needed?

Including Additional Information in the Standard Report

Including the Partner's Name in the Signature. Should SAS No. 58 provide specific guidance on whether, in response to a client's request, it would be appropriate to provide the engagement partner's name below the firm's name?

Explaining the Work Done to Assess Control Risk in the Scope Paragraph. The issue of whether the scope paragraph should include an explanation of the auditor's responsibility with respect to the client's control structure was debated at the time SAS No. 58 was issued. It was considered again in 1991. On each occasion the ASB's decision was not to change the standard report; nevertheless, the issue remains. (A major justification for not including language with respect to the control structure in the scope paragraph is that it was preferable not to enumerate any specific auditing procedures; otherwise, it would be difficult to know where to draw the line in such an enumeration.) Some practitioners have suggested that certain other procedures, such as obtaining client and attorney representation letters, are so significant that they, too, should be enumerated in the auditor's report.

Reporting on Management's Assertions About Internal Control. If management reports on its system of internal control over financial

reporting, should the standard report be modified to allow the auditor to combine, in one report, the report on the financial statements and the report on management's assertions about internal control? That is, would one combined report be preferable to two separate reports.

Implications of the Research

The research, in aggregate, does suggest that the revised audit report has improved communications between the auditor and the users. The strongest effect has been to indicate more clearly the responsibility of management for the financial statements and the role of the auditor. The concept of reasonable assurance has been conveyed more clearly as well as the broad nature of audit procedures. Furthermore, the perceived extent of audit work has not been altered. All of these effects of the new audit report were intended in SAS No. 58.

However, research findings suggest areas where improvements in communications may be possible or where additional research is warranted. The notion of less than 100 percent testing in auditing is still not appreciated by users as fully as the fact that the financial statements are based on GAAP. Future revisions to the audit report could serve to clarify these areas. In addition, users indicated that although the new report delineated more clearly the nature of audit procedures, the audit process is nonetheless seen as ambiguous. Perhaps this confusion is inevitable given the technical aspects of auditing and the inherent limitations present in describing the audit process in a brief audit report. Educational materials provided by the profession that describe audit procedures in further detail may be useful in reducing the level of user ambiguity in this area.

The conflicting research results regarding preceived auditor responsibilities and legal liability under the SAS No. 58 report as compared with the earlier report indicate that this is an important area for future study. Thus far, the research on this issue is limited and exploratory. It is unclear, for instance, whether different opinion formats affect user expectations regarding auditor responsibilities for the detection of fraud or the appropriate application of accounting methods. How will the courts interpret concepts introduced in the new audit report such as reasonable assurance and management representations? Last, there appears to be either a lack of understanding or consensus regarding the notion of "reasonable assurance" in defining the auditor's overall responsibility for ensuring that the financial statements are free of material error. Further research is needed to examine whether misunderstanding or low consensus explain investor views on this matter.

Another issue concerns the most effective means to continue to refine and adapt the audit report in the future. Previously the auditing profession has

largely considered modifications to the current report with limited or no advance research. Another approach would be to identify the paramount intended messages and then consider the most efficient and effective manner of communication based on auditor/user field research and opinions. In some instances, user education may be the optimal approach rather than revising the audit report, whereas in other cases alteration of the report may be preferred. User involvement is essential to ensure that communications are accurate and that the audit report is reflective of changing societal expectations. Research can play a vital role in examining the efficacy of proposed revisions to the audit report or efforts to improve user education. In addition, research that identifies expectation gaps between auditors and users provides an opportunity to consider revisions in auditing standards and reports and/or efforts to educate or lobby user groups.

An additional issue worthy of future research is the impact of the SAS No. 58 report on user decisions. Only two of the studies reviewed examined whether revisions to the auditor's report are significant enough to alter user decisions; the focus has been predominately on perceptions. Although user perceptions are important, ultimately it is vital to determine whether changes in the audit report would have any impact on actions (what has been referred to by some as having "practical significance") —for example, research investigating bankers granting loans, investors purchasing stock, or the courts evaluating auditor culpability.

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Reporting on Consistency

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In this paper, we describe the history of financial reporting consistency and discuss the attendant audit reporting requirements. An overview is also presented of four streams of accounting research relevant to financial and audit reporting on consistency: (1) investigations of auditees' motivations for accounting changes, (2) studies of reactions of capital markets to accounting changes, (3) studies that investigate how economic advisors (e.g., financial analysts) and decision makers employ accounting change information, and (4) studies that investigate auditing issues including how auditors make materiality judgments when evaluating the impact of an accounting change and among-firm differences in audit consistency reporting policies. Subsequently, issues of policy setting and research attention are identified. Noteworthy among these issues are the meaningfulness of the distinction between comparability and consistency, the utility of and conceptual basis for exception reporting with respect to consistency, how auditors evaluate the adequacy of auditees' disclosed justifications for accounting changes, and various aspects of audit materiality judgments including among-firm differences and audit judgment policies when there is an accounting change with an insignificant current effect, but a potentially "substantial effect" in future years.

Statement on Auditing Standard No. 58 (AICPA 1988) mandated numerous changes to the auditor's standard report. One such change involved the so-called *consistency exception*. Specifically, before SAS No. 58, the auditor made an explicit statement in the opinion paragraph of the standard report concerning consistent application of generally accepted accounting principles (GAAP). This statement was required whether the auditor concluded that GAAP was consistently applied or inconsistently applied. Post-SAS No. 58, however, the auditor is required to report *in an*

We would like to acknowledge the comments of our colleagues, Ivan Bull, Frederick L. Neumann, and Richard E. Ziegler.

explanatory paragraph, following the opinion paragraph, on an exception basis; that is, the auditor makes an explicit statement about consistency *only when* the conclusion is that GAAP was inconsistently applied and the current financial statement impact of the change is material. The auditor's statement that consistency has *not* been maintained (i.e., taking exception to consistency) still is *not*, by itself, to be regarded as an opinion qualification. Furthermore, it still is the case that if financial statement disclosure of a material accounting change is inadequate, an opinion qualification is required.

Using the changes introduced by SAS No. 58 as points of departure, we discuss in this paper a variety of issues concerning consistency reporting. The next two sections provide background by briefly reviewing, from both financial and audit-reporting perspectives, the history of consistency and scholarly research related to consistency. The fourth section identifies several current issues of potential policy-setting concern as well as issues that profitably could be the focus of future research. The fifth section completes the paper by providing concluding remarks.

Background

Financial Reporting

As with many accounting issues, the history of consistency can be traced to England. The corporate form of business had been restricted by the Bubble Act of 1720, which was stimulated by widespread management speculation and concomitant investor losses during the early 1700s. With the passage of the Companies Act in 1844, however, corporations experienced a resurgence. One provision of this later act, which was intended to provide investors with some measure of control over management, required that stockholders receive an audited balance sheet. Much of the demand for *consistently* applied accounting principles has been attributed by historians to extant and prospective owners' increased desire to monitor management's actions attendant with the rise of the corporate form of business (see Chatfield 1974).

In the United States, prior to the crash of 1929, there was little regulation of the content and presentation of financial reporting. Therefore, management could disguise unfavorable information by changing the underlying accounting methods and procedures or, in extreme situations, omitting unfavorable information. The potential for harm from these management options was recognized, at this time, by many organizations, including the American Institute of Accountants, the New York Stock Exchange, the Investment Bankers Association of America, and the Federal Reserve Board (see Chatfield 1974) and, with respect to accounting changes, was thought to be greatest when time-series data were analyzed (Hendricksen 1982).

Accountants, however, were split with respect to how to address this problem. Behind this split was a controversy concerning what type of consistency was necessary. To illustrate, three different types of "consistency" are distinguishable from the writings of the time: (1) usage of the same accounting procedures and methods for related items by a given firm, (2) usage of the same accounting procedures and methods from period to period by a given firm, and (3) usage of the same accounting procedures and methods by all firms (Hendricksen 1982). Some accountants felt that "type 3" consistency (e.g., all inventories must be accounted for on a first-in, first-out (FIFO) basis; all depreciation must be calculated on a straight-line basis) was needed. Obviously, adoption of this position renders many related issues moot, since any inconsistencies also would imply "inappropriate" accounting.

Other accountants felt that given the variety of circumstances surrounding different companies, the diversity of current practice and the variety of uses of financial information, the auditee should be given some latitude to select appropriate methods or procedures from those deemed acceptable as long as the methods or procedures selected were disclosed. In 1932, the American Institute of Accountants' Special Committee on Cooperation with Stock Exchanges brought closure to this debate by recommending the latter position (Chatfield 1974). Thereafter, "types 1 and 2" became the foci of financial-reporting consistency, whereas type 3 became known as "uniformity," and was excluded from the consistency umbrella. Although the consistency concept was refined as a consequence of this recommendation, at this time, neither interperiod consistency nor disclosure of accounting procedures or methods was made a financial-reporting requirement.[1]

Policy-setting bodies did not devote significant attention to financial-reporting consistency again until the 1970s. Specifically, in 1971, the Accounting Principles Board (APB) released Opinion No. 20 (FASB 1985) that prescribes GAAP for accounting changes. This pronouncement first defined different types of accounting changes (e.g., estimates, reporting entity, principle) and then focused on changes in accounting principle. Such accounting principle changes were limited to substitutions of one generally accepted procedure or method (which is preferred) for another generally accepted procedure or method. Since the early 1970s, therefore, if material changes were not accounted for and disclosed as prescribed, the resulting financial statements would not conform to GAAP. Furthermore, APB Opinion No. 22 set forth requirements for disclosure of significant accounting policies in financial statement notes (FASB 1985). Approximately forty years passed, therefore, between refinement of the

[1] Curiously, George O. May was the chair of both the committee that recommended types 1 and 2 be the foci of financial-reporting consistency and the American Institute of Accountants' Committee on Accounting Procedures, which failed to adopt such consistency as a requirement for financial reporting (see Chatfield 1974).

consistency concept and adoption of companion requirements for financial-reporting disclosure.[2]

The Auditor's Report

Despite some early examples of acceptable reports provided by the Federal Reserve Board in 1917 and 1929, the U.S. auditor's report was unstandardized until 1933. The first standardized report incorporated the phrase "...in accordance with accepted principles of accounting consistently maintained by the company during the year under review" (see Chatfield 1974).[3] Further, as with financial-reporting requirements, the American Institute of Accountants (1934) excluded "uniformity" from the audit concept of consistency by stating:

> Without the doctrine of consistency and with alternative accounting procedures available, a company—like a juggler—may increase periodic income in lean years and decrease it in fat years by selecting from the alternative methods available the method which produces the periodic income management wants. It is to prevent company manipulation smoothing of periodic income that the doctrine of consistency is directed.

Although significant changes were made to the standard auditor's report in 1939, 1941, and 1948, the requirement to report on consistency effectively was invariant during the approximately fifty-year period leading up to SAS No. 58.[4] The pre-SAS No. 58 second reporting standard of generally accepted auditing standards (GAAS) describes this requirement: The report shall state whether such principles have been consistently observed in the current period in relation to the preceding period (AICPA 1987).

With SAS No. 58, the second reporting standard of GAAS was modified to reflect the exception-reporting responsibility described in the opening paragraph of this paper: The report shall identify those circumstances in

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[2] In addition, note that consistency has received attention from the Financial Accounting Standards Board in Statement of Financial Accounting Concepts No. 2 (*Qualitative Characteristics of Accounting Information*, FASB 1980).

[3] We were unable to find an explicit rationale for including consistency in the standard auditor's report. However, the financial-reporting environment of the time and specifically, the aforementioned absence of a requirement for consistency, may provide the best explanation.

[4] It should be noted that, as discussed further below, the Auditing Standards Board did attempt to change the treatment of consistency in the auditor's report in 1980 but ultimately withdrew the proposal. The proposal, at that time, was based on logic similar to that behind SAS No. 58 and called for complete elimination of consistency exceptions in the auditor's report (see AICPA 1981; Geiger 1989).

which such principles have *not* been consistently observed in the current period in relation to the preceding period (AICPA 1991). Again, such a statement, by itself, is *not* considered to be a qualified opinion and to make this position more salient, the consistency exception now is made in an explanatory paragraph rather than commingled with the opinion. However, if the auditor is not satisfied with the appropriateness of the method or procedure to which the auditee changed, with management's disclosed justification for making the change, or any other aspect of compliance with APB No. 20 (FASB 1985), a qualified or an adverse opinion should be issued.

The motivations for this audit report change (and concomitant change to GAAS) seem to have been twofold. First, as suggested by the Commission on Auditors' Responsibilities (1978), any reference to consistency in the auditor's report effectively may be viewed as the origination, rather than evaluation, of a financial statement assertion. Such assertion origination is inconsistent with the role of the auditor as an attester to financial statement assertions. Second, the audit report reference would seem to be redundant in light of the GAAP requirement to disclose accounting changes and their impact (Landsittel 1987).

Nonetheless, as with the failed attempt to change the auditor's report in 1980 (see footnote 3) the SEC favored maintenance of the status quo, apparently for two reasons.[5] First, the SEC feared that removing the reference to consistency from the standard auditor's report might result in a diminution of audit attention to consistency issues. Second, the SEC felt that the consistency exception served as a "red flag" for financial statement users. Eventually, however, the SEC agreed to remove the consistency reference from the standard auditor's report, but insisted on the exception reporting contained in SAS No. 58. Interestingly, this change could be instituted without modification of Regulation S-X.

Accounting Research

Four streams of accounting research seem relevant to the issue of consistency and are discussed in this section. The largest of these literature streams contains investigations of auditees' motivations for accounting changes. The most prevalent finding has been that changes are made to increase net income (e.g., Neumann 1968; Cushing 1969; Frishkoff 1970; Shank and Copeland 1973; Bremser 1975; Schwartz 1982; Johnson and Dhaliwal 1988; Chewning, Pany, and Wheeler 1989) or as a response to

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[5] These explanations were obtained by personal communication in January 1992 with Dr. Robert W. Rouse, an SEC Research fellow.

poor performance trends (e.g., Bremser 1975; Lilien, Mellman, and Pastena 1988). Other studies, however, suggest that accounting changes are motivated by a variety of factors including an intolerance of ambiguity (e.g., Sorter, Becker, Archibald, and Beaver 1964) and a desire for tax savings (e.g., Morse and Richardson 1983; Dopuch and Pincus 1988).

Similarly, studies motivated from a positive accounting theory perspective have reported that accounting changes are introduced to increase management compensation (e.g., Eggleton, Penman, and Twombly 1976; Watts and Zimmerman 1978; Abdel-khalik 1985; Harrison and Grudnitski 1987; Healy, Kong and Palepu 1987; Abdel-khalik, Chi and Ghicas 1987), to avoid debt covenant violations (e.g., Watts and Zimmerman 1978; Dhaliwal 1980; Holthausen 1981; Daley and Vigeland 1983; Hunt 1985; Harrison and Grudnitski 1987; Johnson and Dhaliwal 1988; Johnson and Ramanan 1988) and to mitigate political or regulatory costs (e.g., Gosman 1973; Cushing and Deakin 1974; Bremser 1975; Eggleton, Penman and Twombly 1976; Warren 1977; Watts and Zimmerman 1978; Morse and Richardson 1983; Ricks 1986).

A second stream of research has investigated the reaction of capital markets to accounting changes. This study assumed a model for market efficiency (Fama 1970) with the capital asset pricing model as a framework (Sharpe 1964; Lintner 1965) to investigate the effect of accounting changes on firms' market returns. Initial studies tested the information content of accounting change disclosures themselves and concluded that little information was conveyed therein (Comiskey 1971; Kaplan and Roll 1972; Archibald 1972; Ball 1972; Baskin 1972).[6] Research interest subsequently shifted to changes involving last-in, first-out (LIFO) since these changes affected cash flows. For example, Sunder (1973) concluded that firms that switched from FIFO to LIFO experienced positive cumulative abnormal returns in the switch years. However, this intuitively appealing result has not been replicated consistently, as some subsequent studies have reported no or even negative abnormal returns for firms that switched to LIFO (e.g., Abdel-khalik and McKeown 1978; Brown 1980; Ricks 1982, 1986) whereas others (e.g., Biddle and Lindahl 1982; Stevenson 1987) supported the initial finding of positive abnormal returns.

One study has investigated the informativeness of audit report consistency exceptions rather than the effect of accounting changes on firms' market returns. Specifically, Hopwood, McKeown, and Mutchler (1989) examined the ability of consistency exceptions to signal firm failure. For two of the three models tested, they reported that consistency exceptions were correlated with future firm failure. Although these authors did not offer a theory that would explain their results, it may be that such results are

[6] However, this conclusion is based on failure to reject the null hypothesis.

simply further evidence that changing firms generally are less successful than nonchangers (see Lilien, Mellman, and Pastena 1988).

A third stream of accounting change research more directly adopted the perspective of financial statement users. In an early study, McCosh (1967) described a computer simulation investigating the value of consistency for time-series comparability. Using a dynamic, multiperiod model that employed both economic and cash flow data (e.g., units of raw material purchased, average price of raw material, number of labor hours, average sales price) and accounting policy data (e.g., inventory pricing, inventory costing, depreciation, management bonuses) McCosh (1967) studied earnings-per-share (EPS) numbers produced from the same set of economic data for two different sets of accounting policy data. Using perfect comparability (i.e., the same accounting policy data for both sets) as the baseline, six different levels of consistency were simulated to determine how much of the variance in the EPS numbers of one set could be explained by the EPS numbers for the other set. The results indicated that consistent application, no matter how diverse the accounting methods may be, resulted in EPS numbers that explained the vast majority of the variance in the other set's EPS numbers (97.12 percent in this simulation). Furthermore, the ability to explain the variance of the EPS figures of another set rapidly declined as the accounting policy data were applied more and more inconsistently. Consistent application of accounting methods, therefore, would appear to capture a great deal of the effect of environmental factors on the firm.

More recently, a number of studies have reported that financial analysts experience relatively greater difficulty in forming forecasts in the presence of accounting changes than they do when changes are not present (e.g., Ricks and Hughes 1985; Hughes and Ricks 1986; Biddle and Ricks 1988; Elliott and Philbrick 1990). Ricks and Hughes, for example, investigated situations in which firms changed from the cost to the equity method of accounting for long-term investments and found that analysts' forecasts displayed systematic errors. Furthermore, these errors were positively correlated with the current-year earnings effect of the change. Hughes and Ricks and Biddle and Ricks reported similar results for firms adopting Statement of Financial Accounting Standards No. 34 (FASB 1979) and firms changing to LIFO, respectively. Similarly, in a study covering a wide variety of accounting changes and employing a research design in which a given firm, in a nonchange period, acted as its own control, Elliott and Philbrick noted that, in change periods, the absolute forecast error and dispersion of analysts' forecasts were significantly greater than in non-change periods. Furthermore, the within-year dispersion was correlated with the absolute value of the income effect of the accounting change.

Researchers have also addressed the possibility that users of accounting information become functionally fixated and thus, do not properly adjust their decision processes when accounting changes are made. Both changes

in inventory flow (Dyckman 1964a, b; Bruns 1965; Dopuch and Ronen 1973) and costing assumptions (Ijiri, Jaedicke, and Knight 1966; Ashton 1976; Swieringa, Dyckman, and Hoskin 1979; Dyckman, Hoskin, and Swieringa 1982; Barnes and Webb 1986) have been investigated primarily with inexperienced, student subjects.[7] Each study can be interpreted as suggesting that decision makers exhibit some degree of functional fixation. These studies typically require the use of one decision process over a number of trials and then observe the extent of failure to alter the process when data are presented that are based on different accounting methods or procedures (e.g., cost of goods sold calculated under full instead of direct costing of inventories). In practice, however, financial statement users would appear to possess at least two advantages over these experimental subjects that may enhance one's ability to avoid functional fixation. First, in practice, users should be more cognizant of the impact of inconsistent data on decision inputs. Second, accounting changes, in practice, are highlighted by disclosures that, typically, have been rather limited in these studies. The study by Swieringa, Dyckman, and Hoskin is the only one that investigated the effect that disclosures of method changes may have on the decision processes of information users. Unfortunately, design weaknesses made the results of the study difficult to interpret. Consequently, additional research is needed with respect to the ability of method change disclosures to mitigate such functional fixation.

A final stream of change research focused on auditing issues. A number of studies, for example, addressed the materiality thresholds associated with consistency exceptions. Results indicate a lack of consensus among auditing firms (Neumann 1969) with some firms apparently using materiality thresholds as high as 25 percent of net income, whereas others used very small materiality thresholds (Frishkoff 1970).[8] In a more recent study, Morris and Nichols (1988) reported evidence that consistency exception materiality decision models vary considerably among CPA firms and that such decisions are of significantly differential predictability. On a more positive note, another recent study by Chewning, Pany, and Wheeler (1989) noted that few audit reports were issued without a consistency exception when accounting changes affected net income by more than 4 percent. Chewning, Pany, and Wheeler also noted that discretionary changes (those made absent of a regulatory stimulus) were more likely to result in consistency exceptions than were nondiscretionary changes.

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7 The study by Barnes and Webb (1986) is a notable exception, using actual business managers as subjects.

8 These results should be interpreted with caution because they may be a function of low net incomes. This possibility is supported by studies (e.g., Lilien, Mellman, and Pastena 1988) indicating that change firms tend to be less successful than nonchange firms.

Other studies attempted to investigate if audit firms have differential propensities to include consistency exceptions in their reports. Both Gosman (1973) and Cushing and Deakin (1974) concluded that Coopers & Lybrand issued significantly fewer consistency exceptions than several other auditing firms.[9] Interestingly, although both of these studies suggested that CPA-firm client portfolio differences may account for this finding, no evidence was reported to support that attribution. In a follow-up study, Warren (1977) failed to identify any significant auditor differences using a similar analysis. Consequently, at present there is not closure with respect to CPA-firm propensities to issue consistency exception reports.

Current Issues

The preceding discussion of the evolution of financial and audit reporting requirements and accounting and auditing research related to consistency suggests numerous issues of contemporary import. In this section, a sample of these issues is described from the policy-setting and research perspectives.

Perhaps the most striking issue relates to the objective of the standard itself and the distinction drawn in APB Opinion No. 20 (FASB 1985) between comparability and consistency. APB Opinion No. 20 distinguishes between comparability and consistency by stating that all accounting changes that affect consistency also affect comparability, but some accounting changes affect comparability but *not* consistency. For example, some accounting changes were described as a normal part of the accounting process (e.g., changes in estimates of useful lives of depreciable assets) and thus, were deemed to be outside of the domain of financial-reporting consistency. If, however, the primary objective of accounting consistency is to facilitate users' abilities to make within-firm intertemporal comparisons, the comparability-consistency distinction may be meaningless. To the extent that changes affecting comparability but not consistency are treated differently, the potential for harm exists. For example, if higher materiality thresholds were used for changes that affect comparability relative to changes that affect consistency, holding the income effect of the change constant, some of the former type may not be disclosed, whereas disclosure would be made if the change were of the latter type. Attempting to legislate that some accounting changes effectively "do not matter" or matter less because, for example, they are a normal part of the accounting process, seems to miss the point. If information produced by accounting methods or procedures that have materially changed is employed, irrespective

[9] Note that the studies by Gosman (1973) and Cushing and Deakin (1974) were based on the same data set.

of the motivation for and nature of such changes, users need to be able to identify their effect or users' intertemporal decision making could be adversely affected.

Interestingly, two surveys (Bird 1969; Carpenter and Strawser 1972) have suggested that one class of users (financial analysts) would like the scope of the consistency standard to be extended. These survey results suggest that there is a demand for retroactive restatements of the financial statements for all material changes (i.e., change in principle, change in estimate, change in entity, and correction of error) rather than just those changes that APB Opinion No. 20 identifies as affecting consistency. Admittedly, however, these survey results are twenty years old and it would seem appropriate for them to be updated. There is also some potential for harm associated with the comparability-consistency distinction to the extent that financial statement users do not fully understand it. It is our view that some of the wording within the applicable professional standards may contribute to a lack of such understanding. For example, SAS section 420 (AICPA 1991) uses the term "comparability" when referring both to the objectives of the consistency standard and to audit reporting with respect to consistency. Subsequently, in the same pronouncement, however, changes that impact comparability, only, are defined to be outside of the scope of audit consistency.

Research may have a further role to play in better defining the needs of users of financial statements with respect to consistency. To elaborate, in the early 1970s, it was not uncommon to hear calls to develop better descriptions of financial statement users' decision models (AICPA 1973). At that time, however, behavioral research tools to elucidate judgment and decision models were considerably more primitive than they are today. Consequently, one potentially fruitful avenue for future research is to investigate by contemporary behavioral methods (e.g., by analysis of verbal data [Ericsson and Simon 1985] or in-depth task analysis techniques [Peters 1990]) the models of financial statements users so that their consistency needs can be determined scientifically rather than by a political process.

Another striking issue concerns the current exception-reporting requirement (under SAS No. 58). Specifically, assuming that the aforementioned logic (i.e., post-APB Opinion No. 20, GAAP requires consistency or adequate disclosure of the effect of material changes) was the reason for eliminating the audit-reporting requirement when consistency has been maintained, the reporting requirement also should have been eliminated when consistency has *not* been maintained. This symmetry argument rests on the observation that, assuming adequate disclosure of the change, the auditee has followed GAAP in both situations. In addition, when there is inadequate disclosure of accounting changes, the consistency exception would seem to contain little new information since inadequate disclosure is a violation of GAAP, which is recognized by issuance of a qualified or adverse auditor's opinion. Even under SAS No. 58, therefore, the auditor is

required to make what is a seemingly redundant disclosure. Further, the auditor's role as assertion attester still is somewhat intertwined with the auditee's role as asserter. SAS No. 58, therefore, did not fully address the convoluted audit-reporting requirements related to consistency that have been documented and so characterized for at least fifteen years (see Commission on Auditor's Responsibilities 1978).

As noted earlier, the cause of the asymmetric treatment is apparently the SEC's contention that the explanatory paragraph acts as a red flag to financial statement users. Thus, for example, the exception taken as to consistency in the auditor's report is not a redundant disclosure, but instead a signal by the auditor that, although he or she is not issuing a qualified or adverse opinion, the user should proceed with caution. At first it may seem that the auditor has little discretion with respect to including a consistency exception in his or her report when an accounting change affecting consistency has been made. However, because only *material* accounting changes require such inclusion and materiality remains largely a judgmental matter, considerable discretion is possible (see the related comments below). This interpretation would be analogous to the one of Banks and Kinney (1982) with respect to their findings on issuance of qualified opinion audit reports in the presence of loss contingency footnote disclosures. It is also consistent with the findings of Hopwood, McKeown, and Mutchler (1989) for pre-SAS No. 58 consistency exceptions. Accordingly, research extending Hopwood, McKeown, and Mutchler to post-SAS No. 58 consistency exception reporting would seem to be of value.

Another possibility is that, irrespective of the redundancy issue, at least some auditors value the ability to draw attention to material accounting changes in audit reports. One potential source of such value is that it may be perceived as a means of increasing the auditor's leverage with the auditee (i.e., to induce the auditee not to make accounting changes) whereas another source may be that it enhances the auditor's ability to protect himself or herself in the legal arena (i.e., it may make the auditor's judgments more defensible). The SEC's posture with respect to the SAS No. 58 exposure draft seems to provide some evidence that regulators share the view that attention-directing paragraphs have utility (see Holstrum 1988; Chewning, Pany, and Wheeler 1990). This view coupled with the research finding that change firms are more troubled than nonchange firms also may explain why some auditors have issued pre-SAS No. 58 consistency exception reports even when the impact of the change was less than 4 percent of net income or even zero (Chewning, Pany, and Wheeler 1990).

Given the many possibilities, it would seem that researchers would be interested in explaining the demand for this seemingly redundant disclosure. Interestingly, many of the comment letters provided in response to the two recent attempts (in the early 1980s and in the later 1980s in connection with the SAS No. 58 exposure draft) to eliminate consistency from the

audit report, were negative (see Geiger 1989).[10] In particular, three of the seven then Big-Eight CPA firms who responded to the SAS No. 58 exposure draft indicated disagreement with the proposals and twenty-five of the sixty-one total respondents who commented on the consistency issue expressed disagreement, even though some persons regarded the changes as "editorial" in nature (Elliott and Jacobson 1987). Unfortunately, the stated reasons for the disagreement are varied and not informative with respect to the genesis of the demand for audit report consistency exceptions.

Another interesting issue involves the judgment that an auditor must make under APB Opinion No. 20 concerning the auditee's justification of an accounting change. Although controversy has surrounded this issue for at least fifteen years (see Revsine 1977), we are unaware of any research describing how auditors evaluate the auditee's stated accounting change justification. Although many accounting changes apparently are made because of changes in regulatory requirements (e.g., a new FASB pronouncement) and thus, are "preferred" by definition, other changes are discretionary and, as noted earlier, are associated with a variety of circumstances. Research would seem to have a significant role to play in elucidating the factors that auditors consider when evaluating an auditee's stated motivations for making discretionary accounting changes. For example, is there reasonable justification if an auditee makes an accounting change (e.g., from FIFO to LIFO) to minimize taxes or, alternatively, must an auditee be able to justify the change primarily on conceptual grounds even though there would be a positive income effect?

A final set of issues concern the application of materiality within the context of consistency. First, there is something of an inarticulation within extant professional standards in that SAS No. 58 seems to preclude issuance of a consistency exception explanatory paragraph when the effect of an accounting change is judged to be immaterial in the current period. AU section 420 (AICPA 1972, paragraph 19), however, seems to suggest that such an exception is permissible when the accounting change is reasonably certain to have a substantial effect in a later year. It would seem that clarifying what is and is not required or permissible in this respect would be of considerable import. Also, little is known about how auditors make these "substantial effect" judgments.

Second, studies have suggested that when evaluating accounting changes, there is considerable diversity in terms of the materiality thresholds employed both within and among CPA firms. In addition, there seems to be substantial variability in terms of the decision models used among CPA firms and in the extent to which consistency exception decisions are predictable. Perhaps such variability is not unique to accounting changes but is a

[10] A news item in the *Journal of Accountancy* (AICPA, April 1981) suggested that the proposed changes were withdrawn in the early 1980s because of cost-benefit considerations.

reflection of the general subjectivity of reporting materiality judgments. Alternatively, it may be that the "problem" is more pronounced for accounting changes. Researchers would seem to have a role to play here in bringing evidence to bear on this issue. Indeed, perhaps this should be a high priority since, in many respects, materiality may be the Achilles' heel of the financial and audit-reporting requirements on accounting changes.

Concluding Comments

In this paper we have described the evolution of the accounting consistency standard from the perspectives of financial and audit reporting. We also have provided an overview of extant research of relevance. On the basis of these discussions, we subsequently derived issues of potential contemporary interest to policy-setting entities such as the Auditing Standards Board and to researchers. Major themes of our discussion are that the distinction between comparability and consistency as well as the auditor's exception-reporting requirements under SAS No. 58 should be reconsidered. The former recommendation follows from recognition that financial statement users may well benefit from comparability rather than mere consistency. That is, intertemporal decisions may be hindered by the lack of information about accounting changes that affect comparability but not consistency.

The latter recommendation arises from the asymmetry in treatment for situations in which: (1) no material accounting change has been made, and (2) a material accounting change has been made but is fully disclosed. In both situations GAAP has been followed, but in the second situation the auditor would be required to include a consistency exception in his or her report. This requirement also continues to cloud the distinction between the auditor and the auditee as some may feel that it effectively puts the auditor in the role of an asserter. The potential contribution that research could make to each of these issues also has been discussed. For example, the needs of financial statement users with respect to consistency could be elucidated by using contemporary behavioral research methods. Such a systematic and scientific approach would seem to be better suited to that end than a political approach. Last, research also could help to explain the demand for seemingly redundant disclosures and provide insights into how and how well auditors make accounting change materiality (and "substantial-effect") judgments.

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Reporting on Uncertainties, Including Going Concern

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Appropriate auditor responsibility for evaluating and reporting on uncertainties, including the "going-concern status" of a client, has long been debated. Most recently, Statement on Auditing Standards (SAS) Nos. 58 and 59 were issued and deal with this area. In this paper we discuss the historical development of auditor responsibility for reporting on uncertainties, summarize relevant research, discuss implementation issues, and suggest future research.

In summary, our historical review reveals an increasing extent of formalization of standards on uncertainties in the United States, especially those relating to a client's going-concern status. Consistent with the auditing profession's attention to the topic, several studies seem to indicate that investors depend on audit reports to highlight significant uncertainties. Yet, especially in the area of going-concern uncertainties, many companies continue to receive a report not modified for going-concern status the year prior to filing for bankruptcy. In addition, terminology used in the standards (e.g., "going concern" and "substantial doubt") currently may be interpreted in varying manners by CPAs. Also, a number of difficulties involved in implementing the new standards are presented.

In this paper we discuss and analyze research related to SAS No. 58 and No. 59 on uncertainties, including doubt about going-concern status. First, we discuss the background of auditor responsibility in this area. Second, we summarize relevant research related to uncertainties; our goal is to describe the general nature of research approaches and the findings, rather than to

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provide a comprehensive literature review.[1] In the third section, we discuss implementation issues based on discussions with practitioners and observation of practice. Fourth, we discuss limitations and implications related to the information presented. Finally, we suggest future research issues and conclude.

Historical Background

The auditor's role and responsibilities in *evaluating* and *reporting on* uncertainties, including the "going-concern status" of a client, have been debated for some time. The evaluation issue relates to whether auditors are better equipped than users of financial statements to identify circumstances likely to impair a client's ability to continue as a going concern or to identify when an unfavorable outcome to other uncertainties is likely. The primary reporting issue concerns whether, and, if so, under what circumstances an auditor who is aware of an uncertainty should modify the audit report when that uncertainty has been properly presented and disclosed in the financial statements. Any audit report modification would then serve only the role of providing a "red flag" concerning the company's potential future problems.

Statement on Auditing Procedure (SAP) No. 15 represents the AICPA's first effort to consider formally the effects of uncertainties, including going-concern uncertainties, on the audit report. SAP No. 15 suggested that the cumulative effect of uncertainties may be so great as to create a situation in which an auditor's report might require an exception, or in which it might not be possible to render an opinion. Subsequently, the SEC's *Accounting Series Release No. 90* and SAP No. 33 required that the phrase "subject to" be used to introduce a qualification of opinion when the financial statements were materially affected by uncertainties. In 1974, the Auditing Standards Executive Committee, the predecessor of the Auditing Standards Board, in SAS No. 2, concluded that an uncertainty concerning ability to continue should be reported on in the same manner as any other uncertainty.

In 1978, the Commission on Auditors' Responsibilities (Cohen Commission) recommended elimination of report modifications for uncertainties, including going-concern uncertainties. The Commission concluded that a responsibility to evaluate whether an uncertainty should lead to a qualified opinion was not compatible with the auditor's basic role. The auditor should evaluate whether uncertainties are properly presented and disclosed in conformity with GAAP and not attempt to reduce uncertainty by predicting the outcome.

[1] Asare (1990) and Boritz (1991) provide very detailed summaries of the available research on going-concern uncertainties.

In March 1981, SAS No. 34 was issued. SAS No. 34 accepted the premise that audit reports should be modified for going-concern uncertainties and provided operational guidance to auditors on assessing a client's likely continued existence. Thus, rather than eliminate the "subject to" qualification, the Auditing Standards Board's solution was an attempt to improve practice by providing additional guidance. SAS No. 34 stated that although an auditor does not search for evidential matter relating to an entity's continued existence, when an auditor becomes aware of information that is contrary to continued existence, modification of the audit report might become necessary. It also established procedures to be followed when such questions arose.

One year later, in March 1982, the Auditing Standards Board, issued a proposed SAS that, if adopted, would have eliminated the subject to qualification. The argument for elimination was based largely on the belief, previously articulated by the Cohen Commission, that an audit report should not be modified when the financial statements adequately present and disclose an uncertainty in conformity with GAAP. In June of that year, before making the change, the Auditing Standards Board held a public meeting to obtain the views of financial statement users. Users attending the meeting argued that the "subject to" opinion qualification was valuable, and that its elimination would be viewed as an attempt by auditors to avoid responsibility to investors. In June 1982, based largely on the views expressed at the public meeting, the Board delayed the release of the proposed SAS indefinitely. Subsequently, in 1986, the Auditing Standards Board dropped its efforts to eliminate such reports, despite a consensus that, contrary to audit reporting requirements, "a 'subject to' opinion is not appropriate if a contingency has been disclosed appropriately under FASB Statement No. 5" (AICPA Auditing Standards Board 1986). The Board also concluded that a project to reconsider the auditor's reporting responsibility when a going-concern question arises might be added to the agenda.

Despite the Auditing Standards Board's contention that properly disclosed uncertainties should not result in modification of the audit report, others have considered this to be an important function performed by auditors. Going-concern qualifications have received the most attention as necessary early warnings of impending trouble. Indeed, some have defined an audit failure as a situation in which an independent auditor issues an unqualified opinion and shortly thereafter the entity goes bankrupt or has major financial problems (Berton 1985). Representative John Dingell, chairman of the House Commerce Committee, stated succinctly, "the level of busted audits has been too high and too spectacular" (Berton and Ingersoll 1985). In his remarks to Congress, Congressman Wyden (1986) stated:

> In one financial disaster after another, including E. F. Hutton, United American Bank, Penn Square Bank, E.S.M. Government Securities, Home State Savings Bank of Ohio, American Savings and Loan of Florida, Drysdale Government Securities, Saxon

> Industries and others, the disaster struck virtually on the heels of clean audit certificates issued by audit firms indicating that the companies were financially sound. The result? Hundreds of thousands of investors and creditors were out hundreds of millions of dollars.

Although informed observers might fault the factual accuracy of this analysis, the popular press generally does not question assertions that auditors are not providing the public with adequate advance warning about the deteriorating finances of companies. Thus, in the mid-1980s, auditors faced a "political situation" in which at least two key representatives believed that not only were going-concern report modifications necessary, but that auditor performance in issuing them needed to be improved. Also, in 1985, one international CPA firm advocated increasing audit requirements to include consideration of a company's financial *condition* as well as financial position. The distinction between position and condition was intended to address specifically public concerns of business failures occurring shortly after a company had received a report without a going-concern modification (Price Waterhouse 1985).

The net effect of the Auditing Standards Board's deliberations appear in SAS No. 58 (all uncertainties) and No. 59 (going-concern uncertainties). In both cases, the "subject to" qualified opinion is replaced with an explanatory paragraph following the opinion paragraph. The guidance about the need to add a fourth (explanatory) paragraph on uncertainties directly tracks SFAS No. 5. When a material loss is probable, but no reasonable estimate of the amount is possible, an explanatory paragraph is required. When a material loss is reasonably possible, the auditor is to consider whether to add an explanatory paragraph based on the magnitude of the amount involved and the likelihood of occurrence.

SAS No. 59 requires auditors to evaluate whether there is substantial doubt about the entity's ability to continue as a going concern for a reasonable period, generally not to exceed one year beyond the date of the financial statements being audited. The recoverability of asset amounts and the amount and classification of liabilities is no longer the deciding factor in whether to modify the report. Substantial doubt about a client's going-concern status is the critical factor.

Research

Importance of Modification

Stock Market "Information" Tests. Various studies, all dealing with pre-SAS No. 58 and No. 59 data, have analyzed whether an "abnormal" stock return reaction occurs when a "subject to" qualified opinion is issued.

The overall approach, adapted from finance research, is one of using prior stock market returns to develop an "expected" return. That expected return is compared to the actual returns around the time of the issuance of a report modified for an uncertainty. If the reaction varies significantly from that expected, it is referred to as abnormal and the report is considered to have provided information to the market.

The results using this approach have been mixed. The earliest studies isolated no effect (Asare 1990). Several subsequent studies, however, concluded that "subject to" qualified opinions had information content. For example, Dopuch, Holthausen, and Leftwich (1986) found a significant negative stock price reaction when the media disclosed that a "subject to" qualified opinion was to be issued. Also, Frost (1991), replicating an earlier study by Banks and Kinney (1982), found that a small sample of firms with "subject to" qualified opinions had more negative stock price reactions than those not receiving such audit reports, although the difference is not statistically significant at conventional levels.

A primary limitation of this approach is that knowledge of the type of audit report to be issued often becomes available concurrently with the release of the information in the financial statements. This makes it difficult to isolate a true market reaction to the audit report. Because the company involved may be experiencing severe financial difficulties, a lack of a market reaction also may occur because investors expected such an audit report well in advance. Assessing such investor expectations is, at best, a difficult task.[2]

Survey and Experimental Research. Survey and experimental research on this topic either asks a respondent whether such reports are desirable or gathers responses to a "case" situation that manipulates one or more related variables. Shank and Dillard (1979) and Campbell and Mutchler (1988) surveyed various financial statement user groups and financial executives and found that they perceived the "subject to" qualified opinion as useful. However, when users are placed in simulated decision-making contexts, the results have been different. Libby (1979a, b) and Abdel-khalik, Graul, and Newton (1986) provided financial statement loan officers with financial statements that disclosed an uncertainty in the notes to the financial statements. One group of respondents was provided financial statement note information on an uncertainty, whereas the other group received that note description plus a report modified as to the uncertainty. Both studies concluded that managements' disclosures of contingencies with "subject to" qualified opinions had no significant additional effect on bankers' assessments of the riskiness of clients. The

[2] Consistent with this limitation, studies by Mutchler (1985) and Dopuch, Holthausen, and Leftwich (1987) have shown that going-concern modified reports can be predicted relatively accurately using publicly available information.

results of both studies are thus consistent with a conclusion that, for the tested populations, uncertainty qualifications were unnecessary.

Subsequently, Pringle, Crum, and Swetz (1990) used a similar approach comparing SAS No. 34 and SAS No. 59 reporting guidelines and concluded that for their (student) subjects, the new audit report format is primarily a change in the form of auditor communication rather than a change in the substance of the information being communicated. However, they also report that the SAS No. 59 approach may have confused some of the subjects.

In summary, prior research on uncertainties and going concern provide limited direction for standards setting. Research relating to the usefulness of "subject to" report modification is not conclusive. The available studies considering the new reporting requirements would seem to imply that a similar situation is likely to exist relating to the expectation gap requirements.

Relationship to Bankruptcy

Comparison to Models. The relationship between subsequent bankruptcy of a client and the issuance of a modified audit report has received research attention, all of it using pre-SAS No. 59 data. One significant limitation of such an analysis is that professional standards make clear that going-concern-related report modification decisions are not equivalent to bankruptcy prediction. The law literature has no parallel to a going concern (American Bar Association 1987). SAS No. 59 provides examples of conditions and events that may raise doubt about whether an entity is a going concern but, as explained in more detail later, does not explicitly define one.

Figure 1, adapted from Boritz (1991) presents the typical stages of business failure in an enterprise. A "severe cash shortage" might lead the auditor to conclude that a going-concern modification is necessary. Yet, subsequently, management's rescue actions may succeed and the company may regain financial health. In such a situation, most would not consider it incorrect to have decided that substantial doubt existed about the company's ability to continue as a going concern. Similarly, a company might fail due to a sudden event subsequent to the audit. Bearing these limitations in mind, a summary by McKeown, Mutchler, and Hopwood (1990) may be used to measure auditor performance in this area. The results of that study approximate and extend those of a number of earlier studies (Asare 1990). As table 1 indicates, the authors divided their sample into "stressed" and "nonstressed" clients.[3]

[3] A "stressed" company exhibited at least one of the following: (1) negative working capital in the current year, (2) a loss from operations in any of the last three years prior to bankruptcy, (3) a retained earnings deficit three years prior to bankruptcy, or (4) a net loss in any of the last three years prior to bankruptcy.

FIGURE 1 Typical Stages of Business Failure (Adapted from Boritz, 1991)

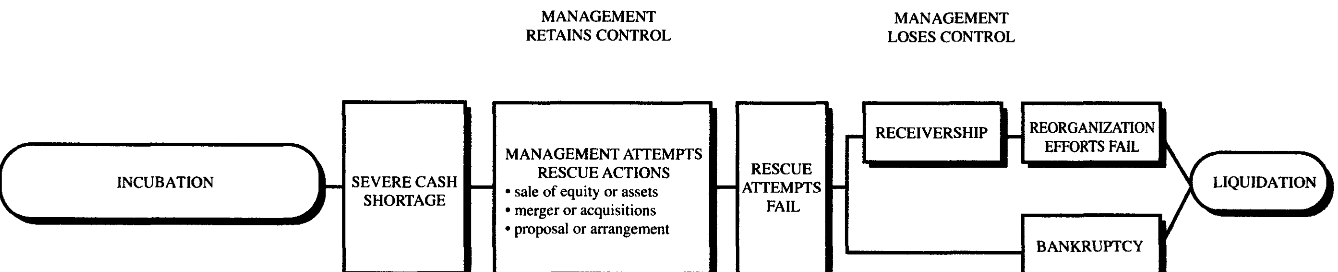

TABLE 1 McKeown, Mutchler, and Hopwood (1990) Sample

Panel A: Companies That Entered Bankruptcy

	Stressed	*Nonstressed*	*Totals*
Modified	54 (46%)	0	54 (40%)
Nonmodified	64 (54%)	16	80 (60%)
Total Bankrupt	118 (88%)	16 (12%)	134 134

Panel B: Companies That Did Not Enter Bankruptcy

	Stressed	*Nonstressed*	*Totals*
Modified	4 (5%)	0	4
Unmodified	76 (95%)	80	156
Total Nonbankrupt	80	80	160
Totals	198	96	294

In short, table 1 indicates that auditors modified their reports depending on whether the company had substantial doubt about going-concern status 46 percent of the time for 134 companies the year before they filed for bankruptcy. On the other hand, using a random sample of 160 companies that did not file for bankruptcy, auditors modified their reports only four times. Similar to the research on the information content of report modifications, these results relate to the time period in which SAS No. 34 was in effect. We are unaware of any such analysis subsequent to SAS No. 59.

These auditor success rates are also lower than a number of studies that used bankruptcy prediction models (Asare 1990). The stress conditions considered in this study are similar to those conditions and events that SAS No. 59 suggests might indicate substantial doubt as to the company's ability to continue as a going concern. In a subsequent study, Hopwood, McKeown, and Mutchler (1991) consider separately stressed and nonstressed companies and the actual failure rate in the population of all companies. Their results indicate that under those circumstances, the auditors' opinions are comparable indicators of bankruptcy as compared with statistical models.

Self-fulfilling Prophecy. Some have argued that the issuance of a going-concern modification is likely to be a "self-fulfilling prophecy." The argument is that the report, rather than the condition of the entity,

may result in the failure of the entity. The casual observation that many companies continue to operate after receiving such reports would seem to indicate that such reports do not invariably lead to business failure. Indeed, Altman (1982) found that in his sample, 75 percent of 213 companies receiving going-concern qualifications between 1972 and 1978 did not go bankrupt. Yet, one can visualize that for a small developmental company needing financing, a going-concern report modification would make capital acquisition more difficult.[4]

Going-Concern Decision Process. Recently, several researchers have attempted to obtain a better understanding of the actual decision process followed by auditors. These researchers have studied, in a going-concern context, such psychological constructs as temporal sequence (mixing the order of evidence presented to an auditor), framing (whether the original assumption is that the company is a going concern vs. a going-concern question), and considering the effect of experience on audit judgments (Ricchiute 1992; see also, Asare 1990 for several references). The results at this point are far from conclusive, but there is some indication that the order that evidence is presented in does affect reporting decisions at least in an experimental setting. Research on framing and experience effects in this area have been even less conclusive.

Report Modification "Trigger" Terms Used in SAS No. 58 and No. 59

The Auditing Standards Board struggled with identifying the point at which report modification for uncertainties should occur. For uncertainties, SFAS No. 5 terminology, including "probable" and "reasonably possible," were retained without embellishment. "Substantial doubt" was selected for going-concern modifications.

Probable and Reasonably Possible. SAS No. 58 suggests that the auditor should add an explanatory paragraph when it is probable that a material loss will occur, but management is unable to make a reasonable estimate of the amount. When a loss is reasonably possible, the auditor is to consider both the magnitude of the amount involved and the likelihood

[4] Anecdotal evidence would suggest that the effect of an audit report modified as to going-concern status might be quite immediate. One of the coauthors interviewed one Big Six partner who recounted a situation in which he, as partner in charge of an audit, thought "long and hard" about issuing a "subject to" qualified report to a client that was seeking a loan. To his relief, the client's management was "glad" to receive the report because it would make clear to the bank how essential the granting of the loan was. The report was issued on a Friday. The bank turned down the loan on the following Monday, and the client filed for bankruptcy on Tuesday.

of occurrence. As indicated above, these terms track SFAS No. 5, which defines them as follows:

> Probable: The event or events are likely to occur.
> Reasonably possible: The chance of the future event or events occurring is more than remote but less than likely.

The general nature of these definitions led to studies that required respondents to operationalize the terms (for example, see Schultz and Reckers 1981; Jiambalvo and Wilner 1985; Harrison and Tomassini 1989; Raghunandan, Grimlund, and Schepanski 1991). These studies asked CPAs to interpret the numerical meaning of the terms "reasonably possible" and "probable." All studies have reported significant variation in replies. Average responses for "reasonably possible" are between 15 percent (Harrison and Tomassini) and 42 percent (Schultz and Reckers). Slightly less variation exists for the meaning of "probable," which typically receives a mean of 70 percent likely.

SFAS No. 5 does not suggest whether the consideration of likelihood of unfavorable outcome and estimation should be simultaneous or sequential in which the auditor first estimates the magnitude of potential loss, and then assesses the probability of its realization. The studies have, in general, found that auditors responding to cases generally *do not* follow a sequential process, but make decisions considering materiality and likelihood simultaneously and also consider "trade-offs" between the two.

SAS No. 58 explicitly includes a trade-off between probability and amount of loss. That is, as the amount involved becomes more material, the auditor is more likely to include an explanatory paragraph in the audit report. Raghunandan, Grimlund, and Schepanski (1991) found that auditors replying to cases did follow this type of a decision process.

Substantial Doubt. SAS No. 59 uses the undefined state of substantial doubt as the triggering point for report modification. Knapp, Wallestad, and Elikai (1991) tested a variety of situations asking 162 CPA respondents to report the numerical probability at which substantial doubt occurs. On an overall basis, the average reply was approximately 55 percent. Among the variables measured was the respondent's perception of the "likelihood that an auditor of a failed firm will be sued." Replies varied as follows based on that perceived risk:

	Substantial Doubt
Low risk of being sued	60.4 percent
High risk of being sued	48.7 percent

Similar to the earlier results concerning SFAS No. 5 terminology, there were large variances in replies. (A standard deviation of approximately 18.5 percent exists for various groups of replies.)

These results may indicate that the general nature of the SFAS No. 5 definition and the lack of a definition for substantial doubt lead to a situation in which CPAs interpret the concepts differently. Yet these studies have fairly significant limitations. All except Schultz and Reckers considered individual CPA replies rather than replies arrived at through group discussions comparable with the decisions of an audit team in a firm environment. Also, all are affected by whether CPAs in practice think in the quantitative terms elicited. For example, a lawyer assessing the outcome of litigation responds in qualitative language: "The client should prevail." It is likely the auditor translates this directly to, "An unfavorable outcome is remote." The auditor does not think, "Ah, 20 percent must be remote."

Expert Systems, Decision Aids

Two expert systems have been described in the literature (Biggs and Selfridge 1988; Dillard and Mutchler 1989). The Biggs and Selfridge model uses current liquidity and operating performance to recognize a going-concern problem. The Dillard and Mutchler model uses a series of suggestions, rules, and methods to make the going-concern reporting decision. Both are at an early stage of development.

Implementation

Some implementation issues relate only to going-concern problems, whereas others relate to all uncertainties, including going-concern problems.

Going-Concern Uncertainties

SAS No. 59 changed existing guidance in the following key ways:

- *Detection*—There is now an affirmative obligation to make an assessment at the conclusion of the audit of the client's ability to continue as a going concern rather than to merely remain aware of the possibility that the assumption of continuity might not hold. However, there are still no required procedures that are especially or solely directed to searching for conditions or events that would indicate a going-concern problem.
- *Time Period*—The focus of the auditor's assessment of ability to continue as a going concern is now tied to "a reasonable period of time" that is explicitly limited to a period "not to exceed one year beyond the date of the financial statements being audited."

- *Evaluation*—Previously the decision to modify the audit report hinged on recoverability of the assets and recognition and classification of liabilities. Now going-concern status is a separate issue.
- *Reporting*—The "subject to" qualification, as mentioned earlier, has been supplanted by a fourth explanatory paragraph for all material uncertainties including going-concern uncertainties. However, use of a disclaimer is still not precluded.

What implementation problems have these changes created, highlighted, or exacerbated?

Detection. Although SAS No. 34 read as if an auditor had to stumble over a going-concern problem before recognizing it, auditors generally were well-aware of the need to evaluate a client's ability to continue. Thus, this requirement has had little effect on practice other than to increase documentation of the consideration. Most CPA firms have adopted a policy of including some routine documentation of the consideration of going-concern status in the workpapers. This documentation may be limited to checking off a box on a generalized form or including a statement in a wrap-up or final memorandum indicating there is no concern with the client's ability to continue.

Time Period. Because the focus of the evaluation is on an explicit *12-month period* following the balance sheet date, there are certain implementation issues. One is generally referred to as the "15-month" problem. This situation arises when the client is not expected to have any financial difficulties for the next 12 months, but the auditor knows that difficulties will exist within the following few months. For example, a client that has recently undergone a leveraged buyout has a large balloon payment due shortly after the 12-month period and will have some difficulty meeting this requirement of the debt agreement.

SAS No. 59 does not acknowledge any need to look beyond 12 months and, in fact, says the reasonable period is *not to exceed* one year beyond the date of the financial statements being audited. Should that, however, be viewed as an impenetrable barrier to consideration of a known financial difficulty? Also, if auditors do begin to reach out to the next few months for a known matter, might that begin to erode the reasonable limit on the time horizon set by SAS No. 59? At this point, a practical solution generally adopted has been to include an emphasis of a matter paragraph in the report that highlights the financial difficulty problem. In this way, the financial statement user is alerted, but the auditor has not extended the going-concern evaluation into the forbidden zone.

Another implementation issue related to time period is the "dating" problem. This problem may arise when the auditor is asked to *reissue* an audit report. Consider the case in which an auditor is asked to reissue an

audit report for the year ended December 31, 1991, prior to the conclusion of the client's next reporting year, 1992. Under current guidance on report dating, the 1991 report is reissued with the original report date. This signals that no auditing procedures were applied since the date of the original report.

The problem arises when the auditor is aware of new conditions that are likely to result in a going-concern modification of the audit report on the financial statements for 1992. In other words, because the auditor is satisfied that the client will survive to the end of 1992 there is no requirement to add an explanatory paragraph to the original report. However, the audit report for 1992 is likely to be modified because of doubt about the client's ability to survive a year beyond the current year end.

Again, a practical solution is to add an emphasis of a matter paragraph to the original report worded somewhat as follows:

> As discussed in Note XX, "Subsequent Events," subsequent to March 10, 1992 [*date of original report*], the Company lost its major customer, incurred significant operating losses, and defaulted on the loan agreement with XYZ Bank. If these conditions continue, it is likely that our report on the company's financial statements for the year ending December 31, 1992, will be modified because of substantial doubt as to the company's ability to continue as a going concern through December 31, 1993.

By including the explicit date of the period for which going-concern status is in doubt, the auditor provides the user of the financial statements with a better understanding of exactly what responsibility the auditor is assuming.

This raises the related issue of whether it would be appropriate to indicate the period of time to which the auditor's substantial doubt relates by routinely including an explicit date. The explanatory paragraph would state that "there is substantial doubt about the Company's ability to continue as a going concern through December 31, 19XX."

Evaluation. SAS No. 34 did not use the phrase "going concern." The auditor was to evaluate the entity's ability to continue. An inability to continue might arise from not being able to meet obligations as they become due without substantial disposal of assets, restructuring of debt, or externally forced revisions of operations, which was effectively equated with insolvency, or other factors not involving solvency. These "other factors" would be significant events such as loss of a principal customer. SAS No. 34 indicated that the auditor's reason for concern with the ability of the entity to continue was the potential effect on the "recoverability and classification of recorded asset amounts, and the amounts and classification of liabilities." A report modification would result only if substantial doubt about continued existence created sufficient uncertainty concerning recoverability, classification, and amounts of material assets and liabilities.

SAS No. 59 made substantial doubt about ability to continue as a going concern, by itself, the triggering point for report modification.

The distinction is illustrated by the development stage company that has not yet produced a salable product. The company has expensed all product development costs. There are no receivables because there are no sales; likewise there is no inventory. Financing is all from equity and there are no employee benefit plans that would result in recording new liabilities on termination. As long as its productive assets have alternative uses so that realization is not impaired, SAS No. 34 would require no report modification. Apparently this would be true even if the company would have to cease operations unless it could produce a salable product and bring the product to market within the next 12 months. SAS No. 59 would require a going-concern explanatory paragraph in the same circumstances. It is doubtful that a competent auditor would have failed to qualify the opinion even under SAS No. 34, but SAS No. 59 is an improvement.

SAS No. 59, however, elevates going-concern status to the report modification triggering mechanism without defining a going concern. This has created implementation issues.

Early drafts of SAS No. 59 did include a definition, such as expected insolvency or bankruptcy. But these legal concepts were excluded from the final draft. As a result, there are conflicting views in practice on the meaning of the phrase *going concern*.

SAS No. 59 in its first paragraph states that:

> Ordinarily, information that significantly contradicts the going concern assumption relates to the entity's inability to continue to meet its obligations as they become due without substantial disposition of assets outside the ordinary course of business, restructuring of debt, externally forced revisions of its operations, or similar actions.

Some view this as the definition of a going concern. They apparently fail to recognize that SASs often do not bother to define central terms. For example, SAS No. 47 on audit risk and materiality defines audit risk, but not materiality. An FASB definition is quoted, but intentionally not adopted.

Others read a definition of sorts into the first paragraph of SAS No. 59 by noting that the first sentence states that the SAS provides guidance to the auditor for evaluating going-concern problems and, in a footnote, that sentence indicates the SAS does not apply to an audit of an entity in the process of liquidation. Thus, an entity would no longer be a going concern when it is probable the entity will be forced to liquidate.

This would mean that in evaluating going-concern status the auditor is assessing the likelihood of a Chapter 7 bankruptcy proceeding. Some, in fact, say that unless a company liquidates, it does continue—there are just new shareholders, the former creditors. However, this seems to be too

sanguine an attitude. The shareholders are wiped out and top management is probably out of a job. An early warning signal that sounds only for imminent liquidation is not going to close any expectation gap.

One problem created by lack of a clear-cut definition is the ambiguity that attaches to evaluating management plans. SAS No. 59 requires that the auditor evaluate management's plans for dealing with a going-concern problem. It defines management plans as including "plans to dispose of assets" and "plans to borrow money or restructure debt." If the auditor is satisfied that the plans can be successfully implemented, presumably an unmodified report is appropriate. However, if a company is not a going concern when it cannot meet its obligations and they become due "without substantial disposition of assets outside the ordinary course of business or restructuring of debt," certain management plans only confirm that the company is not a going concern.

Some also question whether it is feasible to audit management's plans that involve nonoperating actions, such as debt restructuring or disposition of assets outside the ordinary course of business. Normally there is no historical experience for the auditor to use in evaluating the likelihood of these actions being successful. Nevertheless, an auditor must, for example, audit management's planned disposal of a segment of a business. APB Opinion 30 requires an estimate of loss on disposal and loss from operations during the period between the measurement date and disposal.

Clarification and guidance in this area would require explicit definition of a going concern and guidance on evaluating nonoperating actions. For example, the relation of going-concern status to bankruptcy and solvency might be clarified and guidance might be provided on auditing compliance with APB Opinion 30 and similar nonoperating actions. Alternatively, going-concern status might be defined so that plans for nonoperating actions would confirm substantial doubt and the auditor would consider only operating improvements, such as enhanced cash flow from operations, to alleviate substantial doubt.

Reporting. SAS No. 59 both created new reporting issues and continued or amplified old ones. From a user's perspective, a significant new issue is the ability to distinguish emphasis of a matter paragraphs, explanatory paragraphs for an uncertainty, and going-concern explanatory paragraphs.

A particular problem—for example, significant investment in junk bonds—may be the subject of any of the three types of paragraph. A user is aided in distinguishing between a going-concern problem and an uncertainty by the new requirement added by SAS No. 64 to include the phrases "substantial doubt" and "going concern." However, the only way to distinguish between an emphasis-of-a-matter paragraph and an explanatory paragraph for an uncertainty may be the absence of a phrase such as "no provision has been made in the financial statements for this matter" in an emphasis-of-a-matter paragraph. This issue as well as the issue of use of

a disclaimer for an uncertainty relate to implementation of SAS Nos. 58 and 59. Both are discussed further in the next section.

All Uncertainties

Implementation issues for all uncertainties include the type of report to be issued and the proper report disclosure for various types of uncertainties.

Disclaimer for Uncertainty. SAS Nos. 58 and 59 carry forward from SAS No. 2 the substance of a footnote that now states:

> Nothing in this section, however, is intended to preclude an auditor from declining to express an opinion in cases involving uncertainties.

This sentence has led some to conclude that SAS Nos. 58 and 59 permit either a standard unqualified report with an additional explanatory paragraph or a disclaimer of opinion in equivalent circumstances. In other words, there is an option to disclaim or to add an explanatory paragraph in the same situation. The option chosen can have serious implications in practice because the SEC does not accept a disclaimer as meeting the requirements of the 1933 Act for certification of financial statements.

A reporting option was not the intent when SAS No. 2 was issued, even if it is viewed as the current result. When SAS No. 2 was being developed, a requirement to decide whether a "subject to" qualified opinion or a disclaimer of opinion for an uncertainty was appropriate was removed from the authoritative literature. The reason for the removal was the inability to develop reporting criteria for the decision. In other words, the committee members felt unable to provide guidance and as a result rescinded the requirement. However, the committee members did not believe it was appropriate to preclude the use of a disclaimer for an uncertainty.

To prohibit a disclaimer would be tantamount to instructing an auditor to issue an opinion in circumstances in which the auditor personally did not believe he or she had an opinion. In other words, a professional who does not have an opinion should not be required to express one. Thus, the disclaimer was not seen as an alternative in equivalent circumstances. It was to be used only when the auditor did not have an opinion.

The problem was that SAS No. 2 did not provide guidance on when it was not possible to have an opinion. To fill that void in the authoritative literature, some CPA firms developed their own specific guidance on when a disclaimer was necessary. In general circumstances, that guidance provided—with variations in wording among firms—that a disclaimer should be issued when the uncertainty so overshadowed the client's financial position or operating results that there was no substance to the opinion. In specialized industries, some firms provided more explicit guidelines.

Savings Institutions as an Example. A peculiarity of some specialized industries, including the savings and loan industry, is that a company does not fail until a state or federal chartering authority declares that it has failed and takes possession. An important consideration for the chartering authority is usually the solvency of the company. In most regulated industries, this translates into some form of net worth or capital requirement. However, the capital requirement may be based on an average of several years rather than just the current year. For example, from 1982 through 1988 the capital requirement of savings and loan institutions was 3 percent, based on a 5-year average. Thus, a savings and loan institution could be insolvent on a GAAP basis and still meet the net capital requirement.

The current net capital requirements for savings and loan institutions, adopted at the end of 1989, establish differing percentage requirements for tangible capital, core capital, and risk-based capital. In response, some CPA firms have adopted specific criteria for reporting on savings and loan institutions that require a disclaimer when there is an extreme going-concern problem. An extreme going-concern problem is defined as not meeting the tangible capital test, tangible capital below zero, and a capital plan that either has not been approved by the Office of Thrift Supervision or that is not likely to be achieved during the year following the balance sheet date. A savings and loan institution in the same situation with an approved plan and that is likely to be in compliance with the plan within a year would receive an audit report with an explanatory going-concern paragraph following an unqualified opinion. A savings and loan institution that does not meet the tangible capital requirement, but that has tangible capital above zero in the current year and has an approved plan that it is likely to achieve in the coming year, would receive an explanatory uncertainty paragraph rather than a going-concern paragraph following an unqualified opinion.

Distinguishing Uncertainties and Qualified Opinions. The SEC's administrative policies also contributed to another practice problem prior to SAS No. 58 and No. 59 that has continued. The SEC does not accept financial statements in filings that have other than an unqualified opinion caused by a scope limitation or a GAAP departure. In some cases, an auditor was known to treat an item as an uncertainty that might more appropriately be considered a scope limitation or a GAAP departure.

Under APB Opinion 11, for example, to recognize a tax loss carryforward as an asset, realization had to be assured beyond a reasonable doubt. One large public company recorded an asset for a tax loss carryforward, but the audit firm issued a report modified for uncertainty because of uncertainty concerning the company's ability to realize the carryforward.

A new casualty insurance company, or one entering an entirely new line of business, often does not have a sufficient base of historical experience to reliably estimate loss reserves. This is evaluated by some as a scope

limitation because an insurance company would ordinarily be expected to have sufficient experience to reliably estimate loss reserves. Others view this as an uncertainty because for this particular company, the historical experience never existed and the proper reserve will be known at a future date.

Asset Realization Uncertainties. The SEC's administrative policies also prohibit a fourth paragraph for uncertainties that affect asset realization, except for going-concern uncertainties. Apparently the SEC's view is that asset realization is a matter that should be audited and that an evaluation should be made as to whether a write-down is necessary. An uncertainty paragraph should not substitute for a write-down. This policy makes some sense for trade receivables, inventory, and other assets ordinarily presented at net realizable value. However, even in this case, there may be exceptions. For example, the collectibility of a receivable from a single large customer may be in doubt because of that customer's financial difficulty.

Environmental Uncertainties. Environmental problems raise an interesting implementation issue because of the massive potential cost of cleaning up existing problems and the fact that in some industries potential significant future problems are a virtual certainty. Are these risks being properly evaluated? Is the absence of explanatory paragraphs for uncertainties concerning environmental cleanup costs a lurking disaster comparable to the savings and loan crisis?

Limitations and Implications

Limitations

The research is limited by the fact that most of it was conducted prior to SAS No. 58 and No. 59. Studies that attempt to measure a market reaction to a going-concern modification are also limited by difficulties in isolating the effect of the audit report. Release of the report simultaneously with other information makes identifying its effect on stock market returns difficult. Also, isolating circumstances in which such a report is not expected by the market and therefore provides "information" is difficult. Finally, the market studies do not consider the reaction of financial statement users other than common stock investors.

The various studies using experimental and survey approaches address additional user groups. However, they are also limited in that most were conducted prior to the new SASs and they are all affected by questions as to external validity. It is unclear whether the answers to the various questionnaires are indicative of "real world" responses and whether most of the studies on auditor decision making solicit from a respondent what is essentially a team decision.

Implications

Several market reaction studies would seem to indicate that some investors depend on audit reports to highlight significant uncertainties. In certain "surprise" situations equity investors responded to "subject to" qualified opinions. We have not found any study that confirmed these findings for audit reports issued after SAS No. 58 and No. 59 became effective, but stock market reaction in earlier studies would seem to imply that at least one user group values such audit report modifications. Also, survey research has suggested that other groups of financial statement users maintain that they use such reports. These results would ultimately argue that such reports do benefit some investors.

Given this admittedly weak support for the notion that financial statement users do use such modified reports, a basic decision must be made by the Auditing Standards Board as to whether the issue of audit report modification for uncertainties should be reopened.

Should SAS No. 59 be revised to clarify the relationship between going-concern status and the concepts of bankruptcy and solvency? The fact that numerous studies performed prior to SAS No. 59 indicate that approximately one-half of companies that fail do not receive such a modified report in the period prior to bankruptcy may not bode well for the profession due to potential litigation exposure. Has performance on this dimension improved subsequent to passage of SAS No. 59?

The definitions in SFAS No. 5 for "reasonably possible" and "probable" result in situations in which there is great variation in the numerical probabilities that auditors attach to these phrases. The term "substantial doubt" in SAS No. 59 leads to similar results. The Auditing Standards Board may wish to consider whether providing quantitative guidance in this area would be meaningful or worthwhile.

Future Research

At one extreme it may be argued that all of the research performed prior to issuance of SAS No. 58 and No. 59 is of only historical interest since the standards have changed. Thus, an updating and replication of the various research approaches might be called for. In the process, a refinement of these approaches might lead to more meaningful results. For example, the power of statistical tests of stock market return data may be improved by a greater emphasis on identifying situations in which the issuance of the report is a surprise (for example, see Dopuch, Holthausen, and Leftwich 1987).

Most of the behavioral studies have reduced what is a team decision to an individual decision. The extent to which such individual decisions generalize to the "real world" is open to question. An obvious extension of extant

research is to replicate it in a group setting. However, obtaining realistic audit teams is not likely to be accomplished easily, if at all.

It would seem that standard setting and practice would both benefit from a significant amount of descriptive research. Table 2 summarizes audit reports of 600 large SEC-reporting companies as presented in *Accounting Trends and Techniques*. One notices, perhaps, a slight increase in modified reports. On an overall basis, has the shift from a qualification to an explanatory paragraph resulted in more, fewer, or no change in uncertainty-related modifications? What types of uncertainties result in explanatory paragraphs other than going-concern problems? What types of uncertainties are disclosed only in notes to financial statements without an explanatory paragraph in the audit report? For going-concern uncertainties, what sources of substantial doubt are described in explanatory paragraphs? Is there any relationship between the sources of substantial doubt and the issuance of a disclaimer? Are SAS No. 58 and No. 59 being complied with? Do explanatory paragraphs on going-concern problems include the phrases "substantial doubt" and "going concern"? Do descriptions of some uncertainties seem to indicate GAAP departures or scope limitations?

TABLE 2 Summary of 600 Audit Reports Reported in *Accounting Trends and Techniques*

	1990	*1989*	*1988*	*1987*	*1986*	*1985*	*1984*
Going Concern	18	12	8	13	11	13	14
Litigation	20	18	11	10	12	18	16
Other	8	12	7	9	15	15	9
Total Uncertainties	46	42	26	32	38	46	39
Total Companies	34	32	23	24	30	33	29

The reaction of users of financial statements to different types of report modifications also seems to be a fertile area for research. Do users recognize or react to the distinctions among an emphasis-of-a-matter paragraph, a fourth explanatory paragraph for an uncertainty, and an explanatory paragraph indicating substantial doubt about ability to continue as a going concern? Do users perceive the explanatory paragraph differently from a "subject to" qualification? Do users regard a disclaimer of opinion and an explanatory paragraph for an uncertainty as substantially different? Personally, we would be very surprised if users did not recognize a substantial difference. Would such a difference mean that the Auditing Standards Board should restore the requirement to disclaim an opinion and provide guidance on when an uncertainty precludes an opinion?

What criteria do CPA firms use for disclaimers? Do the criteria that have been developed by CPA firms for when to disclaim provide operational guidance?

Have CPA firms developed operational criteria for qualitative concepts of likelihood (probable, reasonably possible, substantial doubt)? We noted earlier the limitation that auditors may not make likelihood evaluations in quantitative terms. There is a related research area of comparable significance. Because audit situations do not come with numerical probability labels, it might be worth researching what numerical probability auditors attach to particular factual situations involving uncertainties.

Conclusion

We hope we have raised provocative issues for both researchers and standard setters. Although there are several interesting issues concerning reporting on uncertainties, generally, the most important and perplexing issues relate to going-concern uncertainties. This is not surprising because going-concern reporting is at the heart of a central element of the expectation gap. How can a business fail shortly after receiving an unmodified audit report? If an audit cannot provide an early warning of impending business failure, what good is it? For this reason, we believe one of the most significant issues our review of the literature and practice has highlighted is the relationship among going-concern status, solvency, and bankruptcy. In short we cannot seem to agree on the answer to a simple question—What do we mean by a going concern? Until that question is answered, both research and practice will suffer.

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Audit Committees: Is There an Expectations Gap?

An Analysis of SAS No. 61, *Communication With Audit Committees*

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SAS No. 61, Communication With Audit Committees, *was issued with a stated objective of ensuring "that the audit committee receives additional information regarding the scope of the audit that may assist the audit committee in overseeing the* financial reporting and disclosure *process for which management is responsible." This paper examines changes in the responsibilities placed on audit committees as they attempt to meet the public's demand for effective governance structures and then discusses the auditing profession's role in meeting those demands. Many of the increasing demands on audit committees can be traced to the perceived power of corporate management, including influence on the board of directors, and the need to provide another independent view of the financial reporting process. SAS No. 61 is seen as a positive step in influencing the activities of audit committees. However, the demand for increased responsibilities for audit committees in the corporate governance area creates a gap between rising expectations and the role presently served by the independent auditor. The nature of these rising expectations is addressed, the gap between current performance and the expectations is identified, the appropriate role and limitations of the public accounting profession in meeting the increasing demands are discussed, and suggestions are offered for increasing the responsiveness of the profession.*

SAS No. 61 was issued with a stated objective of ensuring "that the audit committee receives additional information regarding the scope of the audit that may assist the audit committee in overseeing the financial reporting and disclosure process for which management is responsible."

The communication required by SAS No. 61 supplements requirements in other auditing standards, such as SAS No. 53, *The Auditor's Responsibility to Detect and Report Errors and Irregularities*, SAS No. 54, *Illegal Acts by Clients*, and SAS No. 60, *Communication of Internal Control Structure Related Matters Noted in an Audit*, that require auditors to communicate with audit committees when they become aware of significant deficiencies in an organization's control structure, or of the existence of fraud, or of illegal acts, in the course of their audits.[1] The standards, by describing the information that should be communicated to audit committees, give us a picture of the auditors' views of the responsibilities of audit committees. At the same time that auditors have been addressing these issues, other organizations and groups, such as the Treadway Commission, the SEC, the GAO, insurance organizations, as well as accounting firms, have been describing their views of the responsibilities of audit committees. Our paper examines the differences—or, in other words, the gap—between those points of view. The gap appears to be substantial.

This paper examines the evolving role of audit committees as they attempt to meet the public's demand for effective governance structures, compares that evolving role with the information that auditors are currently required to provide to audit committees, explores the gap between required auditor communication and the expectations of audit committees, and points out areas where the public accounting profession may assist audit committees more effectively in meeting their responsibilities.

External auditors and audit committees both can help improve each other's performance. The requirements can be compared with the challenge issued by A. A. Sommer, Jr. (1991), chairman of the Public Oversight Board of the SEC Practice Section of the AICPA:

> If American business is to meet the demand that its governance structures and practices match public expectations, it is vital that audit committees do a better job. And, if auditors are to reduce the hazards posed by litigation, they must avail themselves of every resource available to them. Clearly the audit committee is one of those resources. It is in their interest to be sure that resource is as effective as it is possible to make it, and they are in position to make it so.

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[1] For example, SAS No. 53, paragraph 28, states:

> For the audit committee to make the informed judgments necessary to fulfill its responsibility for the oversight of financial reporting, the auditor should assure himself that the audit committee is adequately informed about any irregularities of which the auditor becomes aware during the audit unless those irregularities are clearly inconsequential.

The Audit Committee, the Board of Directors, and the Power of Management

Audit committees, no matter how effective, may not be an adequate substitute for effective, independent boards of directors. Nor should audit committees necessarily be expected to replace the corporate oversight functions reserved for the board of directors (e.g., if the board of directors is dominated by insiders and friends of the CEO, then it is difficult to expect that the existence of an audit committee will necessarily improve the oversight function). Leslie Eaton, writing in *Barron's* (1990), states it another way:

> The Eighties, whatever the decade's other claims to fame, was rife with corporate excess. It was a period when managements prospered mightily, often at the expense of the corporation's true owners. Thus, executives' pay and perks soared, even when their companies' performance faltered. Shareholders' interests, meanwhile, were subverted by greenmail payments, poison pills and golden parachutes.
>
> Which raises the question: Where were the corporate directors, who are supposedly the stewards of those shareholders' interests?. . .
>
> One reason directors have failed as corporate watchdogs, quite obviously, is that they tend to represent management rather than shareholders.

Similarly, Wechsler (1989) is very critical of the influence of management on the audit committee:

> Too many audit committees are more creatures of the company's management than they are watchdogs over shareholders' interests.

Wechsler quotes Peter Martosella, brought in to run Crazy Eddie's, a failed retail company, after it was discovered that the financial statements were fraudulently prepared. Martosella states:

> You have to be careful about how much you expect of the audit committee. You're talking about people brought in by the CEO and you're telling them they shouldn't necessarily listen to him. It's not realistic, especially when the chief executive is a charismatic person, a darling of the securities world.

A survey by executive recruiter Korn/Ferry International indicated that in 74 percent of the 426 companies it surveyed in 1989, the new directors had been appointed upon the recommendation of the CEO. Indeed, one of the reasons many audit committees are not attuned to danger signals is that CEOs often pick other CEOs as members of the board of directors and they often serve on each others' boards. This, coupled with the lack of time to

adequately serve on a number of boards, tends to invest even greater power in corporate executives. The strength of chief executives in dictating operating procedures and covering up losses or "managing earnings" allowed massive frauds in such companies as Miniscribe, Crazy Eddie's, and Equity Funding to take place. Some of these companies, such as Miniscribe, even had audit committees, but they were not attuned to the danger signals of the fraud.[2]

Such views of the limitations of audit committees are not limited to the United States. The *Economist* writes in its May 30, 1992, issue:

> In principle, shareholders have two main controls over managers: the company board and the company's auditors. The board is supposed to look after their interests; non-executive directors, especially, are expected to do so. Auditors are supposed to tell shareholders whether a company's account of itself is broadly correct. *Neither control is working properly.* Boards are dominated by the company's bosses; non-executive directors, though approved by shareholders, are nominated by the chief executives they are meant to monitor. Auditors, too, are far closer to a company's managers, who supply the information they need, than to shareholders; other sorts of lucrative work, such as management consulting and tax planning, may hang on the auditor's relationship with management.

Hopefully, the nature of that relationship may now be changing. The recent example of the Board of Directors at General Motors assuming a more positive stance may be an indication that Boards of Directors in many organizations may become more independent in action in the 1990s (White and Ingrassi 1992). Such movements may greatly assist the audit committees in accomplishing the tasks that seem to be demanded by the public.

The Evolution of Audit Committees

The concept of an audit committee is not new. Audit committees were proposed by the AICPA as long ago as 1937 and have been recommended by the SEC since 1940 as one way of addressing the problems raised in the McKesson–Robbins case. The New York Stock Exchange recommended the formation of audit committees in the early 1970s and made it mandatory for listing on the Exchange after 1978. The American Stock Exchange recommends the formation of audit committees, of which the majority

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[2] For a description of the ineffectiveness of audit committees at Miniscribe, see Curtis C. Verschoor. 1990. "Miniscribe: A New Example of Audit Committee Ineffectiveness." *Internal Auditing* (Spring): 13–19.

must be outside directors. The National Association of Securities Dealers and Quotation Analysts (NASDAQ) adopted a requirement in 1989 that audit committees should be established, "the majority of the members of which shall be independent directors." The recommendations have been taken to heart. Sommer (1991) reported that a 1989 survey by Korn/Ferry International found that 97.7 percent of the companies responding to their survey, which were listed on all three exchanges, had audit committees and none included "inside" directors.

Audit committees are recommended to help ensure the integrity and independence of the audit function and to protect the public interest. Accounting Series Release No. 123, issued March 23, 1972, provides an overview of the SEC's long-standing interest in audit committees:

> The Commission,. . .endorses the establishment by all publicly-held companies of audit committees composed of outside directors and urges the business and financial communities and all shareholders of such publicly-held companies to lend their full and continuing support to the effective implementation of the above-cited recommendation *in order to assist in affording the greatest possible protection to investors who rely upon such financial statements* [emphasis added].

The implied message is that audit committees represent an effective device to protect outside investors who rely on financial statements. But, the demand on audit committees has not stopped with the call for oversight of the integrity of financial statements; indeed, the demand on audit committees has continued to expand beyond the scope of the financial reporting process. There are many reasons for the calls for more effective audit committees. These include—

- The relaxation of rules affecting competition in the public accounting profession.
- The increase in power of corporate executives.
- The increase in incidences of fraudulent financial reporting.
- The increase in takeovers and other business combinations.
- The increase in businesses and other entities affecting the "public interest," but that are not publicly held companies.
- Governmental pressure, especially GAO reviews of the banking industry.

Reaction to these forces can be seen in the following calls for expanded audit committee effectiveness.

The Securities and Exchange Commission

As noted earlier, the SEC has been an active proponent of the audit committee concept. Although the earlier pronouncement focused on the

financial reporting process, its commissioners have been active in promoting a larger role that includes an emphasis on broader corporate governance issues. As early as 1979, A.A. Sommer Jr. (1980), then an SEC commissioner, encouraged audit committees

> to approve in advance each professional service provided by the independent auditors, and review their independence; to consider the range of audit and non-audit fees of the independent auditors; to review the adequacy of the corporation's system of internal controls, and propose major changes in accounting policy; to direct and supervise investigations into any matter within the scope of its duties; to make recommendations and reviews in respect to the corporation's code of corporate conduct and business practices; and to review the corporation's report to stockholders and other financial statements prior to publication.

Sommer's broad role contains items that had not been addressed previously in the auditing literature such as proposing major changes in accounting policy, directing and supervising investigations, monitoring compliance with the corporation's code of conduct and business practices, and reviewing (all) financial statements (not just annual reports) before publication. Most of the items advocated by Sommer had been embraced by the SEC in Accounting Series Release No. 278 in 1978. That release also contained the explicit task of recommending the "engagement or discharge of the independent auditors." The push by the SEC for audit committees to become more involved in corporate governance issues has since been echoed in many subsequent reports on the evolution of audit committees.

AICPA Activities on Audit Committees: The 1970s and 1980s

The AICPA has been a long-time advocate of effective audit committees. However, it was not until the issuance of SAS No. 61, *Communication With Audit Committees*, in January 1989, that it specifically established a requirement for formal communication with audit committees as a standard part of each audit.

Informal Recommendations: 1979. A 1979 special committee on audit committees appointed by the AICPA concluded that audit committees were not necessary for either the maintenance of auditor independence or for the performance of an audit in accordance with generally accepted auditing standards. However, it did comment that audit committees could be helpful to both corporate directors and independent auditors in fulfilling their responsibilities. The committee report went on to specify the following duties that the audit committee should perform:

1. Approve the selection of the independent auditor

2. Review the arrangements and scope of the audit
3. Consider the comments from the independent auditor with respect to weaknesses in internal accounting control and the consideration given or corrective action taken by management
4. Discuss matters of concern to the audit committee, the auditor, or management relating to the company's financial statements or other results of the audit
5. Review internal accounting procedures and controls with the company's financial and accounting staff
6. Review the activities and recommendations of the company's internal auditors

The Commission on Auditor's Responsibilities (1978). The Commission on Auditor's Responsibilities (often referred to as the Cohen Commission, 1978) reiterated the importance of audit committees and independent directors in achieving a proper balance between the auditor and management and in protecting the shareholder's interest. The Cohen Commission states:

> The important point is that the auditor should have direct access to a significant number of board members who are not part of management. Outside members of the board of directors are in a unique position to represent the shareholders' interest, to monitor the performance of management, to provide adequate support to the independent auditor, and to make changes within the organization.

The Cohen Commission statement extends the potential responsibilities of the audit committee to one of representing shareholders and effecting change in an organization.

Opposition to Expanded Role of Audit Committees

Traditionally, this more expansive role of the audit committee has been met with opposition on the part of the auditing profession. That view was summarized by Larry D. Horner, then chairman and chief executive of Peat, Marwick, Main & Co., in a 1987 speech to the National Association of Corporate Directors. Horner outlined audit committee activities in a traditional sense, but included overseeing the company's internal accounting controls. However, he objected to expansion into operational areas:

> More importantly, a committee should not take on functions that involve it too directly in operational matters. This will impair the committee's independence and credibility can suffer. . . . For this reason, Peat Marwick opposes any mandate or movement that would detract from the audit committee's oversight of auditing and financial reporting. (Bacon 1990)

The outside public accounting firms were not the only groups who resisted expansion of the audit committee duties. Joseph Wright, chairman of the Audit Committee of Bethlehem Steel stated in a 1979 speech:

> While it is obvious that boards of directors must have oversight responsibility for a corporation's environmental behavior and community relations, these are not really functions of an audit committee, and they should not be. . . .The same goes for operational audits; they are a necessary part of corporate management, but can divert an audit committee from its primary responsibility regarding financial audits. (Wright 1980)

Others also disagree on the extent that audit committees can, or should, be involved in detailed issues regarding corporate accounting. Wright points to a 1979 report of a committee of the American Bar Association which states:

> It [the audit committee] is not equipped to make determinations as to specific actions the corporation should take in the areas of financial accounting and reporting. . . .No audit committee should undertake to determine the scope or extent of the annual audit, decide upon financial accounting standards to be used in the preparation of financial statements. . . .These are, and must remain, functions of management and/or the independent auditors.

That traditional view stands in marked contrast with the recommendations from the GAO and the Treadway Commission discussed below.

The Treadway Commission

The *Report of the National Commission on Fraudulent Financial Reporting* (1987, hereafter referred to as the Treadway Commission) cited an effective, vigilant audit committee as one of the cornerstones of an effective policy to minimize the incidences of fraudulent financial reporting. The Treadway Commission recommended that all public companies should be *required by the SEC* to establish audit committees composed *solely of independent directors*. However, the Treadway Commission also recognized that it is not enough to simply have an audit committee; care must be taken to structure and staff the audit committee to ensure its effectiveness. Their prescription for audit committee activities and responsibilities was quite broad and included:

- The board of directors of all public companies should be required by SEC rule to establish audit committees composed solely of independent directors.
- Audit committees should be *informed, vigilant, and effective overseers* of the financial reporting process and the company's internal controls.

- All public companies should develop a written charter setting forth the duties and responsibilities of the audit committee. The board of directors should approve the charter, review it periodically, and modify it as necessary.
- Audit committees should have adequate resources and authority to discharge their responsibilities.
- The audit committee should review management's evaluation of factors related to the independence of the company's public accountant. Both the audit committee and management should assist the public accountant in preserving his or her independence.
- Before the beginning of each year, the audit committee should review management's plans for engaging the company's independent public accountant to perform management advisory services during the coming year, considering both the types of services that may be rendered and the projected fees.

The recommendations of the Treadway Commission envisioned an active role for audit committees in overseeing a company's financial reporting process and its internal control structure. Additionally, it should play an important role in assisting the public accountant in preserving independence, including an analysis of management's plans for procuring other services from the audit firm.

The Conference Board Report: A 1988 Survey on Practice

The Conference Board has conducted two major surveys of audit committees: the first in 1978 (Bacon 1979) and again in 1988 (Bacon 1990). The Board cites the rationale for the 1988 report as an opportunity to examine changes in the audit committee as an institution that stood "out in bold relief as a success story among the array of organizational approaches to make corporate boards of directors more effective" (Bacon 1990). They cite seven major reasons for the increased call for more effective audit committees.

1. *Corporate failures.* Bad judgment, or mismanagement, and inadequate financial controls and reporting systems are often cited as major contributors to corporate failures and bankruptcies. They suggest that effective, independent audit committees could help monitor such activities.
2. *Takeovers and business combinations.* Mergers, especially unfriendly takeovers, have generated substantial litigation, with much of that litigation focusing on false or misleading information about financial circumstances. Such allegations call the audit committee's role into attention.

3. *Growth in internal auditing.* The growth of internal auditing and the responsibilities of audit committees are inextricably intertwined. The increased professionalism of the internal audit community facilitates and contributes to the functioning of many effective audit committees.
4. *An "expectation gap" regarding independent audits.* The Conference Board report describes the audit committee as one of the ways by which the profession has responded to questions about its responsibility to ensure the integrity of an organization's financial statements.
5. *The Treadway Commission Report.* The Conference Board believes the Treadway Commission may represent the "most influential private-sector initiative" on audit committees.
6. *Other private sector initiatives.* The study cites initiatives by the Institute of Internal Auditors and the American Law Institute as major contributors to the effectiveness of audit committees.
7. *Regulatory and legislative initiatives.* Most of the push for expanded and effective audit committees at the time of the Conference Board report came from the SEC.

The Conference Board notes that the above cited factors have pushed the audit committee to expand beyond its initial role of simply overseeing the annual report and discussing financial audit matters with the external auditor. This expanded responsibility is best summed up in their words:

> Most of the tasks that stretch the committee's reach beyond financial issues relate to *monitoring corporate behavior*, both the firm's as a whole and on the part of individual executives or other employees [or directors]. Thus, many audit committees now oversee the *content of, and compliance with, corporate policies governing ethical behavior and employee conflict of interest.* Some committees also monitor compliance with specified laws such as the Foreign Corrupt Practices Act, or with the Defense Industry Initiatives. . . . Some have an even broader mandate to *monitor the company's compliance with the law in general*; this may include reviewing litigation against the company or its employees or directors. . . . A final point on the audit committee's enlarged role: This committee is sometimes the logical choice when a situation arises that requires investigation or review at the board level but does not fit easily into the job description of any particular board committee. Several of the audit committee's characteristics recommend it: (1) it is made up of outside directors, which gives it objectivity; (2) it is accustomed to probing; and (3) *it has experience working with outside accounting firms* [emphasis added] [Bacon 1990].

Clearly, the Conference Board sees audit committees emerging with an expanded scope of responsibilities. Interestingly, they cite the audit

committee's experience working with the outside public accounting firms as one of the major qualifications that should allow them to be more effective in this expanded realm of duties. The Conference Board also addressed the extent to which audit committees are formally taking on responsibilities related to the expanded role. As seen in table 1, which is based on a survey of 689 corporations, audit committees presently have the authority to perform many of the activities, such as initiating investigations, monitoring compliance with the Foreign Corrupt Practices Act, and monitoring compliance with laws or regulations as cited above.

TABLE 1 Authority of Audit Committee to Carry Out Various Activities

Audit Committee Activity	*Authority (%)*	*No Authority (%)*	*Not Established (%)*
Meet privately with outside auditors	98	1	1
Meet privately with internal auditors	93	1	6
Initiate investigations	86	1	13
Monitor compliance with the Foreign Corrupt Practices Act	79	6	15
Monitor conflict-of-interest policy	76	8	15
Monitor code of ethics or behavior	74	8	18
Monitor compliance generally with laws or regulations	72	8	20
Review quarterly financial statements	68	12	20
Monitor Racketeer Influenced and Corrupt Organizations Act (RICO)	64	8	29
Hire outside expert advice or service	61	8	31

Insurance Guidelines for Audit Committee Members: Another Insight Into Scope of Duties

National Union Fire Insurance Co. is the leading underwriter of Directors and Officers (D&O) insurance in the United States. They sponsored a study to examine causes of litigation against boards and officers and to make recommendations to audit committees. The nature of claims made against boards and officers (D&O Claims) also serves as a guideline to expectations of audit committee members.

Their 1989 report, *Audit Committees: A Self-Assessment Guide*, identifies D&O claims as a source of concern with an average growth rate in claims of 10 percent per year. They cite a trend in which many of the higher dollar claims were directly related to financial reporting or matters

associated with financial reporting, and companies that experienced losses showed greater susceptibility and frequency to D&O claims than those companies without losses. A description of the types of claims provides some insight into public expectations of audit committees and directors. The five major sources of claims cited in their study were:

1. *Irregularity in securities issuance.* These mostly relate to representations contained in financial statements—both the annual statement and quarterly statements.
2. *Misleading representations.* These apply to annual and quarterly reports to shareholders.
3. *Failure to follow mandated procedures.* Many of these procedures are set forth by legislative and regulatory bodies and include procedures specifying financial reporting. A prime example is given in management's representation that there is a proper functioning of the system of internal control.
4. *Improper expenditures.* These are claims against the companies for incurring expenditures that are not prudent or exceed company-stated policy. Often audit committees are charged with reviewing the processes that ensure the propriety of these expenditures.
5. *Conflicts of interest.* Many of these are claims that involve transactions with related parties. The proper disclosure of such transactions is often called into question.

The insurance report develops a set of self-assessment guidelines that should be helpful for organizations in reviewing the scope of their audit activities and the independence of the committees. An outline of the questions contained in that assessment is included in the appendix.

The General Accounting Office Report on the Banking Industry

The General Accounting Office (GAO) has performed a number of studies relating to failed financial institutions. Their findings are not surprising: many of the causes of the failures were related to numerous internal control breakdowns that contributed to improper extensions of credit, outright fraud, and insider loan dealings. They called on audit committees to provide an "independent review" of management's conduct of the business of the bank.

The GAO, in a separate study, expressed significant dissatisfaction with the functioning of audit committees in banking institutions (GAO 1991). Their criticism touched on areas such as independence, expertise needed to perform their tasks, and the lack of information available to perform independent assessments of key bank operations (and the audit committee's

reliance on the external auditors for much of that information). The GAO reported that many bank audit committees had members who had customer relationships with the banks. More than half of the audit committee chairs interviewed indicated that their committees lacked expertise in some specific areas where they had oversight responsibilities. Finally, the GAO indicated that audit committees were very reliant on external auditors for the wide variety of information (not all of which are contained in financial statements) needed to perform their analysis. They were also concerned that internal auditors who reported administratively to bank management may not be sufficiently independent to provide objective information, or have banking regulators consistently provide effective early warning signals. The GAO was critical of the public accounting profession on two fronts:

1. The annual external audit did not consistently help identify or make recommendations to resolve problems related to internal controls and compliance with laws and regulations. For example, they reported that fourteen of the twenty-five chairpersons that reported significant asset quality/loan collectability problems and four of the six chairpersons that reported significant problems with compliance with banking laws and regulations, also reported that their external audits did not help them identify these problems.
2. Audit standards do not require adequate examination and reporting on internal controls and compliance therewith. They were critical in their interpretation of the control standards, asserting that the current standards do not require auditors to examine any management or administrative controls that are not directly related to financial statements. Their example is that controls that might provide reasonable assurance that the bank is in compliance with safety and soundness laws are generally not examined, and the existing standards do not require tests of compliance with any controls.

The GAO reported that audit committee chairpersons felt that additional information and analyses from the outside auditors beyond what is currently required in financial statement audits would be highly useful to audit committees. Specifically, a majority of respondents wanted to receive an analysis of the adequacy of management's control structure and compliance with applicable banking laws and regulations.

The GAO recommended that legislation be passed that—

- Requires all federally insured depository institutions to have independent audit committees made up solely of outside directors.
- Requires large institutions to maintain an audit committee that (1) does not have members that are large customers of the institution, (2) includes members with banking or related financial management expertise, and (3) has access to legal counsel.

Most of these recommendations were included in the *Federal Deposit Insurance Corporation Improvement Act of 1991.*

Consistent with their previous recommendations, the GAO also recommended that an auditor's report on management report on its system of internal control, and that it report to the institution and the regulators on the institution's compliance with laws and regulations that are identified as relating to safety and soundness where compliance can be determined objectively. Finally, as in the report from the insurance industry cited above, they recommend that independent accountants for large institutions perform reviews of quarterly financial data. The general thrust of the GAO recommendations for banks also applies to other financial institutions such as mutual insurance companies, savings and loans, and credit unions that operate in the public trust.

The Public Accounting Profession and Audit Committees

As noted above, the public accounting profession has been an effective agent for change. Although the profession cannot mandate the scope or duties of audit committees, it can require that certain information be communicated regularly to the committee. The profession can also effectively serve by educating audit committees on matters that will assist them to accomplish their expanding responsibilities.

SAS No. 61: An Agent for Effective Change

SAS No. 61 expanded the scope of the independent auditor's responsibility to ensure that the audit committee receives information useful to assist them in "overseeing the financial reporting and disclosure process for which management is responsible." It specifies the following matters that must be communicated to audit committees, either orally or in written form:

1. *Auditor's responsibility under generally accepted auditing standards.* The committee should be informed of the responsibility taken by the auditor. The audit committee should be warned that an audit is "designed to obtain reasonable, rather than absolute, assurance about the financial statements."
2. *Significant accounting policies.* The audit committee should be informed about the initial selection of and changes in significant accounting policies or their application, especially the accounting for controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

3. *Management judgments and accounting estimates.* A number of financial frauds have taken place through the manipulation of accounting estimates. Audit committees should be informed as to the critical assumptions, past data, and the processes used by management in making significant estimates.
4. *Significant audit adjustments.* The committee should be informed of significant adjustments that could, either individually or in the aggregate, have a significant effect on the entity's financial reporting process. This communication should take place even if management agreed to make such adjustments.
5. *Other information in documents containing audited financial statements.* The auditor needs to communicate the nature of the responsibility and any reservations regarding the fairness of the presentation of the other information.
6. *Disagreements with management.* Disagreements with management can arise over a wide range of items, including (1) application of accounting principles, (2) management's judgments on important accounting estimates, (3) scope of the audit, (4) disclosures to be included in the audited financial statements, and (5) wording of the audit report. The disagreements should be discussed with the audit committee, even if the disagreements were resolved to the auditor's satisfaction.
7. *Consultation with other accountants.* If the auditor is aware of management's consultation with other accountants, the auditor should discuss the nature of the consultation and the auditor's views on the significant items that were the subject of the consultation with the audit committee.
8. *Major issues discussed with management prior to retention.* This item is designed to discourage "shopping for accounting principles" since the audit committee would be aware of any potential agreements reached by new auditors and management regarding treatments of controversial accounting areas or the scope of the audit.
9. *Difficulties encountered in performing the audit.* This communication is designed to focus on significant audit difficulties that were the direct effect of management, such as unreasonable delays in providing information or delays caused in commencing the audit.

The auditor is still required to communicate significant deficiencies in the organization's control structure, the discovery of fraud or illegal acts, and reservations about interim financial information. It would appear that the requirements of SAS No. 61 should meet two of the objectives of audit committees as set forth in the Treadway Commission's recommendations: overseeing the financial reporting process and assisting the public accountant in preserving independence. SAS No. 61 has had another positive change: it has encouraged auditing firms to expand their regular interaction

with audit committees thereby becoming more conversant with the needs of audit committees.

Recent Public Accounting Firm Guidance on Audit Committees

Many public accounting firms have recognized that the external auditor does indeed serve a unique role that could assist audit committees in meeting their public expectations. For example, Grant Thornton (1988), in one of its regular newsletters to financial institution clients, states:

> The auditors are a gold mine of information. For some reason, bank and S&L staff will often confide in auditors about operating problems, faulty documentation, or even fraud. The external auditors have a better chance of passing this information on to the audit committee than the internal auditors.

Advocates of expanded communication with audit committees may be disappointed that Grant Thornton only describes the information as something they "have a better chance of passing along to audit committees" rather than being *required* to pass it along. But it does recognize that auditors can expect to communicate more information to audit committees.

Other public accounting firms also see a broader role for audit committees. Deloitte & Touche, in its booklet *Current Issues for Audit Committees, 1992*, cites the following examples of special projects the audit committee may undertake to ensure that the company's disclosure obligations are satisfied:

- Investigating questionable payments or lapses of internal control
- Monitoring compliance with the company's code of conduct
- Assessing the adequacy of internal control over electronic data processing operations or certain computer-accessible data
- Measuring the impact that changes in accounting standards proposed by the FASB or other regulatory bodies are likely to have on the company.

Arthur Andersen & Co., in its booklet *Audit Committees in the 1990's*, firmly comes to grip with the growing global economy and the need for independent and effective action by audit committees. They recognize that "expectations of regulatory agencies, shareholders, lenders and the public at large have risen dramatically in recent years. These expectations, worldwide, are likely to broaden even further in the 1990's and beyond." Their view is broad:

> The Audit Committee, with the full Board, should concentrate on critical business issues and assure itself that management and the

independent auditors have focused on the areas of greatest risk to the company.

Their subsequent conclusion is the same as that of the Committee of Sponsoring Organizations of the Treadway Commission in its preliminary report, *Internal Control—Integrated Framework*:

> The Audit Committee, in conjunction with, or in addition to a strong internal audit function is in the best position within an entity to identify and act in instances where top management overrides other internal controls or otherwise seeks to misrepresent operating or financial results.

Areas of risk cited in the Arthur Andersen & Co. document include elements of the corporate control environment, regulatory matters, and business risk. A review of these risk areas provides an avenue to which we can compare the potential expectation gap between audit committee needs and SAS No. 61. Elements of that detail are briefly discussed below in each of the areas of (1) monitoring the overall corporate control environment, (2) ensuring a sound financial reporting function, and (3) fostering ethical behavior.

Monitoring the Overall Corporate Control Environment. In assessing control, much of the discussion in the AA booklet focuses on traditional areas already discussed. However, the information needed to understand, assess, and monitor the financial planning and control function includes knowledge of an organization's—

- Strategic business plan.
- Annual operating budget.
- Future business, financial, and control risks.
- Key financial and business controls.
- Data processing function and related controls.
- Management information systems.
- Liquidity.
- Long-term commitments.
- Regulatory requirements.

Ensuring a Sound Financial Reporting Function. Audit committees are increasingly concerned that a sound reporting function exists if they are to meet their expanding responsibilities. They can accomplish this analysis only if they thoroughly understand the business and related accounting concepts. This area includes—

- Understanding the company's business.

- Understanding and assessing the financial reporting process, including an understanding of the complexity of company business and financial systems, significant judgmental reporting matters, and the historical reliability of the company's reporting system.
- Understanding and assessing the fairness of financial reporting.

Fostering Ethical Behavior. AA sees a broad role for audit committees in fostering and monitoring an ethical environment in the organization. This includes the assurance that a code of conduct is developed, implemented, and effectively monitored.

Rising Expectations: Is There a Gap or Is It a Nonaudit Role?

Expectations of audit committees are clearly growing. It is not expected that required auditor communication address all the issues of rising expectations, but it is necessary to periodically compare the rising expectations with current responsibilities. A summary of those expectations and SAS No. 61 and other reporting requirements is shown in table 2.

As can be seen in table 2, expectations of audit committees have evolved to an extent where much is expected of them. As pointed out earlier, a large part of this is caused by changing ideas about corporate governance and the growing recognition of the responsibility of the board of directors to serve as an independent check on the powers of management. Also, as noted earlier, many of these responsibilities are being thrust on the audit committee, because usually it is the only committee of the board composed solely of outside directors, its members are used to probing, and working with independent, objective third-party advisors. In this changing environment, we feel that external auditors, as well as others, have an important role to play. However, the external audit role defined in SAS No. 61 is restricted to financial reporting issues, problems in conducting the audit, significant accounting policies, judgments, and estimates, and "opinion shopping," rather than broader and more important issues of corporate governance. Our specific recommendations about what changes are necessary are discussed in the next section.

Questions may be raised as to whether this is a legitimate role for auditors to play. However, the changing environment may thrust this role on accountants by holding them responsible for not providing such information. As the earlier quotation from Al Sommer (1991) stated: "If auditors are to reduce the hazards posed by litigation, they must avail themselves of every resource available to them. Clearly the audit committee is one of those resources. It is in their interest to be sure that the resource

TABLE 2 Comparison of Audit Committee Expectations and Auditor Responsibilities

Expectations of the Role of Audit Committees	*Possible Information Providers*	*SAS No. 61 Requirements*
Oversee financial reporting controls; evaluate changes in accounting policy; review financial statements (annual and quarterly); measure impact of changes in accounting standards and monitor related party transactions	External auditor; financial management	Limits auditor responsibilities to reporting deficiencies in internal control; initial selection and choices of accounting policy; audit adjustments; reservations about interim information
Assess areas of greatest risk to the company; possible liquidity problems; major loss contingencies; asset quality; marginal operating units or product lines	Management; external auditor; internal auditor	
Oversee internal controls; ensure propriety of expenditures; ensure compliance with regulations and laws; control EDP operations	External auditor; internal auditor; company counsel; financial management	Reporting deficiencies in internal control; reporting fraud and illegal acts
Monitor the overall corporate control environment; evaluate management and administrative controls	External auditor; internal auditor; financial management	Reporting deficiencies in the control environment
Evaluate and assist in maintaining independence of outside auditor; recommend engagement or discharge of outside auditors	External auditor; financial management	Reporting disagreements with management; consultations with other accountants; issues discussed prior to retention

(continued)

TABLE 2 Comparison of Audit Committee Expectations and Auditor Responsibilities *(continued)*

Expectations of the Role of Audit Committees	*Possible Information Providers*	*SAS No. 61 Requirements*
Review provision of other services by outside auditor	External auditor; financial management	
Review material transactions, contracts, and status of legal matters	External auditor; financial management; company counsel	
Review audit and non-audit fees, arrangements and scope of the audit, and results of the audit	External auditor; internal auditor; financial management	Reporting difficulties in performing the audit
Perform independent review of management's conduct of business and safety and soundness issues	External auditor; internal auditor (more limited)	
Direct and supervise special investigations	External auditor; internal auditor; company counsel	
Review compliance with a code of conduct, management perquisites, ethical behavior, and conflicts of interest	External auditor; internal auditor; company counsel	

is as effective as it is possible to make it, and they are in a position to make it so." Some accounting firms are clearly moving toward recognizing this increased responsibility. For example, Arthur Andersen believes that independent auditors should be prepared to answer the following questions:

- Has the audit identified any areas of serious concern relative to the overall corporate control environment?
- To what extent is a review of compliance with government or other regulatory requirements a part of the annual audit? Are you aware of any areas of significant risk or instances of noncompliance?
- What issues or concerns exist that could have a serious future adverse impact on the financial or operating stability of the company? Do you believe that these are being addressed by management?
- Are the personnel in the financial organization sufficient in number, experience, and capability for the size and complexity of the company and its activities?
- Putting yourself in the Audit Committee's position, are there any other key questions that you (the auditor) believe should be asked by us as outside directors?

Brochures from other firms suggest similar types of questions.

Clearly, there is a gap between expanding responsibilities and *required communication*. Also, our analysis of table 2 shows that there are many areas where external auditors have a competitive advantage in assisting the audit committee members in performing their tasks.

Recommendations and Future Research

SAS No. 61 has been effective in promoting communication with audit committees. However, as discussed in the previous section, there are areas where the auditing profession could more effectively meet the challenge offered by Sommer at the beginning of this paper to ensure that this resource (i.e., the audit committee) is as effective as possible. The first set of recommendations may have implications for the Auditing Standards Board. The second set of recommendations are more pertinent to the general practice of public accounting in assisting audit committees to be more effective.

Recommendations With Potential Standard-Setting Implications

1. The required communication in SAS No. 61 to audit committees should specify that the auditor be required to meet at least once annually with

the audit committee without members of management present. The internal audit profession should develop similar standards for meeting with audit committees. Those standards should be incorporated into audit committee charters.

2. The SEC should consider having the auditor review quarterly financial data on all publicly held clients, significant nonpublicly held financial institutions, and other companies that have significant operations in the public trust. The results of that review should be communicated to the audit committee.
3. Communication with audit committees ought to be expanded to include a discussion of compliance with significant laws and regulations where noncompliance may cause unusual risks for the organization.
4. SAS No. 55 cites an effective and independent audit committee as one of the important elements of an organization's control environment. However, there is a concern as to what constitutes "independent" in terms of audit committee membership. The profession should consider providing additional guidance in evaluating the independence of audit committees—as noted above, it is more than just being an outside director. An audit study guide on effective audit committees could develop suggestions on the content of meetings, the audit committee charter, and the potential audit committee role in evaluating compliance with laws and regulations.
5. The profession should consider the development of guidance to assist auditors and audit committee members in evaluating aspects of internal control such as those being developed in the Committee of Sponsoring Organizations (COSO) report and cited in the GAO report that have traditionally been viewed as administrative controls, but are important in assessing business and control risk.
6. The SEC should consider expanded reporting on the resignation of audit committee members.

Recommendations for Public Accounting Firms

1. External and internal auditors should anticipate the information needs of the audit committee and help it be an effective force. The financial management of the company can help this effort by providing regular briefings as well as training on important issues to committee members.
2. Audit committee members need to be educated in several areas, including those reporting issues in which judgment is required, the nature of the business, operational and financial risks facing the company, as well as complex financial reporting issues.
3. The public accounting firms should work more aggressively with audit committees in ensuring that management takes follow-up actions in light of their findings and discussions.

4. Public accounting firms should work with clients and their internal auditors to establish audit committees in organizations such as mutual insurance companies that could affect the public well-being.
5. The public accounting profession should work with the internal auditors in planning and working to meet the needs of audit committees. The public accounting profession can reinforce for audit committee members the importance of the internal audit function, including its usefulness in helping the committee operate effectively.
6. External auditors need to alert audit committees about potential problems as soon as they are noted.

Future Research Recommendations

Audit committees are evolving and there is a call for more responsibility in the area of corporate governance on a worldwide basis. But are there limits to audit committees? These limits and the profiles of effective, independent audit committees need to be examined further. We suggest the following topics for further research:

- *Factors affecting the independence of audit committees.* To what extent do audit committee members have relationships with management that may negatively affect their independence? What are these factors? Should these factors be monitored by, or reported to, the SEC?
- *Methods to improve accountability of audit committees.* To what extent should the actions of the audit committee be communicated outside of the corporation, especially regarding controversial issues where auditors and management may have had disagreements? What mechanisms exist to ensure that audit committees communicate effectively with the boards of directors?
- *Limits and expectations of audit committees.* There are limits to the role that an audit committee can take in dealing with broad corporate governance issues. What are those limits? What mechanisms exist for the audit committee to carry out its responsibilities if it has disagreements with both management and the board of directors?

Concluding Comments

Audit committees have been, and continue to be, an important component of the system of corporate governance. During the last decade they have been asked to assume an even greater role. The external auditing function can assist audit committees in performing that function and can do so within the parameters of SAS No. 61. However, the profession also needs to assist audit committee members in achieving needed effectiveness through the implementation of the recommendations discussed above.

Appendix

Audit Committees: A Self-Assessment Guide

Note: The following questions are offered as top-level questions to begin inquiry into the nature of Audit Committee activity. A *No* answer to any of the questions requires the committee to consider the effect of the answer on its activity. A *Yes* answer leads to further questions to explore the extent to which procedures relating to the question have been effectively implemented.

I. Organization

1. Is your Audit Committee composed of a majority of independent directors?
2. Is the chairman an independent director?
3. Does the Audit Committee follow a written charter?
4. Does the Audit Committee meet at least three times annually?

II. Financial Reporting

1. Does the Audit Committee review annual financial statements, footnotes, audit adjustments, accounting changes, and where required to be filed, the annual report on Form 10K?
2. Does the Audit Committee review quarterly financial statements and, where required, Form 10Q and 8K filings?
3. Does the Audit Committee review transactions with related parties?
4. Does the Audit Committee review status of income and other tax returns, reserves, and significant disputes with taxing authorities?
5. Does the Audit Committee review terms of material transactions, contracts, and other agreements as they affect the financial statements?
6. Does the Audit Committee review the status of significant legal matters affecting the Company?

III. External Auditing Matters

1. Does the Audit Committee recommend or approve the selection or retention of the external auditor?
2. Does the Audit Committee evaluate the independence of the external auditor?
3. Does the Audit Committee review the proposed scope and activities of the annual audit plan to ensure adequate coverage?
4. Does the Audit Committee review the effect of significant changes in accounting principles, auditing standards, and SEC reporting requirements on the scope of the audit?

5. Does the Audit Committee review the results of the completed audit?
6. Does the Audit Committee review the weaknesses and recommended improvements in the system of internal control reported by the external auditor?
7. Does the Audit Committee review the timetable for implementation of these recommendations?
8. Do the external auditors have free access to the Audit Committee?
9. Are the external auditors engaged to review quarterly financial statements?

IV. Internal Auditing Matters

1. Does the Audit Committee approve the hiring or termination of the chief internal auditor?
2. Does the chief internal auditor have free access to the Audit Committee?
3. Does the Audit Committee review the proposed internal audit program and its relationship to the scope of the external audit plan?
4. Does the Audit Committee review the proposed scope of any special projects or investigations?
5. Does the Audit Committee review the reports resulting from internal audit work as they relate to financial reporting?
6. Does the Audit Committee review the reports resulting from internal audit work as they relate to weaknesses and recommendations for improvement in the system of internal control?
7. Does the Audit Committee review the timetable for implementation of recommendations to correct weaknesses in internal controls?

V. Other Matters

1. Is there a procedure in effect to advise the Audit Committee, on a timely basis, of any serious breakdown in internal controls or management fraud?
2. Does the Audit Committee review management perquisites?
3. Does the Audit Committee review reports on any illegal, improper, or sensitive payments?
4. Does the Company have a code of business conduct? If so, does the Audit Committee review the compliance procedures?
5. Does the Audit Committee have procedures to document its activities, including the reasons for its decisions?
6. Does the Company include in its annual report to stockholders, a management report dealing with management's responsibility for financial statements and the system of internal accounting control?

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Implementing SAS No. 55: An Interim Report

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SAS No. 55 may have the broadest potential impact of any of the expectations gap standards. It increased the factors to be considered in control risk assessment (including risk at the assertions level), provided new definitions, and altered the requirements for control testing. The related Audit and Accounting Guide showed how the standard can be applied to control testing in an electronic data processing (EDP) environment.

We reviewed the literature on SAS No. 55 and the implementation guidance of several Big Six, large non-Big Six, and smaller firms. We found that auditors are being directed to consider a broader range of control factors and to assess control risk at the assertions level. Also, EDP guidance is now more systematic and consistent across firms. However, the requirements of SAS No. 55 are subject to more varying interpretations than were its predecessors. We found that implementation guidance across firms is more varied, especially for control testing. Thus, SAS No. 55 may have mixed success in narrowing the expectations gap.

Between September 1984 and April 1988 only two SASs were issued by the Auditing Standards Board (ASB). April 1988 brought nine new "expectation gap closing" standards, including a major revision of the official guidance on internal control—SAS No. 55. SAS No. 55, *Consideration of the Internal Control Structure in a Financial Statement Audit*, was accompanied by an unusually large number of explanations and support statements as well as a subsequent audit guide to provide additional guidance and elaboration (AICPA 1990). There were also expressions of concern from ASB members and statements from auditing professors and students.

Given the passage of time, what can now be said about SAS No. 55? How has it been implemented? How has it affected practice? Has it been as successful in improving auditing as the proponents claimed it would? Have consequences been as dire as its detractors predicted? Although we

cannot be definitive in answering these questions, we can provide an interim review report of some changes to date.

In this brief paper, we review the claims and counterclaims made about SAS No. 55 and select several key points of controversy for follow up. We then review the scholarly and practice literature on internal control, SAS No. 55, and the related audit guide. This is followed by an analysis of audit policy and practice guidance of four Big Six and three second nine public accounting firms, as well as an audit guide used by a large number of smaller firms. Finally, we offer some concluding remarks.

SAS No. 55: Promise and Pitfalls

Before attempting to assess the implementation of SAS No. 55 and whether it has been successful, it is useful to review some of the claims made about why it was needed, what it was intended to accomplish, and why some had opposing views. Our review includes justification of the statement by the ASB's chairman (Sullivan 1988) and three 1988 *Journal of Accountancy* articles explaining the statement to AICPA members (Guy and Sullivan 1988; Monk and Tatum 1988; Temkin and Winters 1988).[1] The opposing views are from those ASB members expressing qualified assents and dissents to issuance of SAS No. 55, a professor and former AICPA vice-president (Carmichael 1987), a discussant's comments on Sullivan (Kinney 1988), and two articles evaluating SAS No. 55 (Morton and Felix 1990, 1991).

Supporting Views

According to the ASB's chairman, SAS No. 55 was based on an analysis of Treadway Commission materials and some unpublished research conducted by Coopers & Lybrand (Sullivan 1988). SAS No. 55 was needed to correct some serious weaknesses in AU section 320 (AICPA, *Professional Standards*, vol. 1)—the descendant of Statement on Auditing Procedures (SAP) No. 54. In particular, correction was needed to (1) broaden the auditor's review of internal controls to consider additional types of misstatement, especially fraudulent reporting by management; (2) focus on financial statement assertions; and (3) encourage use of multiple levels of control risk and not simply a "rely" or "don't rely" approach.

Some concerns related to weaknesses in the wording of AU section 320 itself, and some involved application of the guidance in practice (table 1

[1] These latter articles were reprinted in an AICPA booklet entitled *Implementing the Expectation Gap Standards* (AICPA 1989).

summarizes both types of comments). As an example of the former, all commentators believed that the focus of AU section 320 was too narrow. In planning audits, auditors did not consider all possible misstatements that might arise—notably intentional misstatement by management. Sullivan (1988) stressed that misstatements are typically not in the transactions but in fraudulent reporting.

It should be noted that SAP No. 54 was the *source* of the guidance that the auditor should consider possible errors that might arise in the accounting process. AU section 320, paragraph 74, described a four-step "conceptually logical approach." Also, paragraph 53 of AU section 320 states that an internal control review "should be designed to provide. . . an understanding of the *control environment* and. . . the *accounting system* [emphasis added]." However, it is true that most of the AU section 320 guidance focused on transactions and controls over transactions.

TABLE 1 Criticisms of AU Section 320 Said to Be Alleviated by SAS No. 55

Criticism	*Sullivan (1988)*	*Guy and Sullivan (1988)*	*Temkin and Winters (1988)*	*Monk and Tatum (1988)*
Weaknesses in wording:				
Focus is on transactions and control procedures, and not on environment and accounting system	X	X	X	X
Assertions not addressed	X	X	X	X
Inadequate recognition of effects of EDP	X			
Compliance test sampling for transactions is over-emphasized	X		X	X
Relation of substantive tests to *compliance* tests and control weaknesses not clear	X		X	
Weaknesses in application:				
Auditors implicitly rely on internal control without adequate documentation	X			X
Reliance tends to be all or nothing	X		X	X

The lack of attention to the control environment may lead to a lack of consideration of the possibility of fraudulent reporting by management or to lax implementation of controls by management's employees. One might argue that the possibility of management fraud is properly a part of the inherent risk that exists even with excellent controls, and that (top) management fraud is within the scope of another expectations gap standard (SAS No. 53). However, almost all would agree that the potential effectiveness of internal control procedures can be undone by a management with fraudulent intent or that is lax in its attitude toward controls.

The proponents of SAS No. 55 also believed that the wording of AU section 320 was not clear as to the relation of substantive tests to compliance test results and control weaknesses. Many auditors believed that compliance tests were tests of transactions and that they applied only to individual transactions (Temkin and Winters 1988). Monk and Tatum (1988) comment that statistical sampling is not required to assess control risk and frequently is used in compliance testing when it is not needed.

Other expressed concerns related to weaknesses in the application of the guidance of AU section 320 in practice. That is, although the words might be in AU section 320, auditors did not behave according to the standard. One very serious claim was that, due to confusion about the requirements for reliance, many auditors stated in their workpapers that they did not rely on controls, but *implicitly* relied on them for some assertions (Sullivan 1988). Implicit reliance might exist without even a review of the internal control "structure." Although this behavior was not sanctioned by AU section 320, Sullivan claims that it was the result of the section, possibly because auditors failed to understand compliance sampling. Finally, three of the four papers listed in table 1 state that, under AU section 320, control reliance tended to be "all or nothing" rather than various degrees of reliance, depending on the circumstances.

Overall, we interpret these comments to favor a less structured, less detailed, more holistic approach to control risk assessment.

Opposing Views

ASB members expressed many reservations about particular features of SAS No. 55. Two ASB members gave qualified assents to issuance and four others dissented from issuance of the entire document. This is the largest number of members expressing dissatisfaction with a final statement in the history of the ASB. At issue were the definition of "control tests," the extent of control testing required to support an assessment of control risk at less than the maximum, the role of evidence in control risk assessment, and the relation of control weaknesses to substantive tests (see table 2).[2]

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[2] Note that the latter two issues were also alleged weaknesses in AU section 320 that SAS No. 55 was designed to replace.

TABLE 2 Some Critical Responses to SAS No. 55

Response	*ASB Members' Qualified Assents and Dissents (1988)*	*Carmichael (1987)*	*Kinney (1988)*	*Morton and Felix (1990, 1991)*
Weaknesses in wording:				
Relation of substantive tests to *control* tests and control weaknesses not clear	X	X	X	X
"Evidence" is redefined and is ambiguous				X
Control risk definition unclear	X			X
Weaknesses in practical application:				
Less rigorous (less conclusive) control testing is required	X	X	X	X
Efficiency is encouraged while effectiveness is slighted	X	X	X	X
Overreliance on management representations and controls is encouraged	X	X	X	X

Beyond concerns about the clarity of wording, some ASB members also believed that SAS No. 55 might lead to *less effective* auditing and might widen the expectations gap. Dissenting members' concerns about effectiveness included: "Placing undue reliance on effectiveness of specific control procedures based solely on inquiry of client personnel and inspection of client-prepared documents"; the need for "review and evaluation" of internal control and not merely an "understanding" of controls; and that SAS No. 55 "does not clearly distinguish the operating effectiveness of an internal control structure policy or procedure from the placing in operation. . ." (AICPA 1988a).

Academic commentators raised similar concerns about wording and the possible reduction of audit effort leading to overreliance on controls. For example, Morton and Felix (1991) explain how auditors with different beliefs about the possible existence of material misstatement can come to substantially different levels of achieved audit risk. This is due to the new definition of control risk and the role that control testing plays in its assessment.[3] Kinney (1988) laments that the focus of SAS No. 55 is on efficiency instead of effectiveness. He cites several reminders that evidence supporting a low-risk assessment in one area may also imply low risk in related areas. These reminders of interconnections that reduce audit work are not balanced by reminders of those that may increase it. For example, recent litigation cases and Waller (1992) indicate that when misstatements exist there are often multiple misstatements. This fact has substantial implications for the assessment of risk.

Both Kinney (1988) and Carmichael (1987) were concerned that the changes in wording would lead to underauditing in practice. At issue was ambiguity as to what credit should be taken for management's attitudes toward controls, when reliance on controls and low inherent risk assessments could eliminate substantive tests, whether maximum risk meant zero reliance, the nature and extent of control testing, and how control risk assessments relate to substantive tests.

Overall, the ASB and academic commentators expressed beliefs that the new guidance allows many possible interpretations with different implications for audit effectiveness. This view may have been shared by others. The discussant of Morton and Felix (1990) gives the rather surprising view that "literal interpretations of SAS No. 55 can be misleading" (Kreutzfeldt 1990).

Judgment Research on Internal Controls

Since Ashton's 1974 article on internal control judgments, a significant portion of audit judgment and decision-making research has used an internal control setting. Student and auditor subjects have been studied while learning internal controls, assessing control risks, making judgments about the extent of tests of controls, and evaluating the effects of their internal control work on planned substantive tests. As a result, a number of useful insights have been generated. We believe some have had an impact on the policies and practices of individual firms. Early work by Ashton (1974), Joyce (1976), and Mock and Turner (1981), for example, suggest that auditors

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[3] SAS No. 55 also broadens the concept of "evidence" to include evidence about controls. To our knowledge, prior AICPA literature limited the concept of evidence to that which helps to satisfy the third standard of field work ("sufficient competent evidential matter"). Under SAS No. 55, risk assessment evidence that relates to the risk that misstatement *might* occur may be confused with substantive evidence for limiting the detection risk that misstatement *has* occurred.

were not consistent in their assessments of the qualities of internal controls or their importance. More recent studies suggest that, in line with complaints about AU section 320 and SAS No. 55, auditors have difficulty linking internal controls to errors (Bonner 1990).

In Frederick (1991), practicing auditors and auditing students were asked to recall from memory internal controls that would be effective in preventing or detecting specific errors. His purpose was to improve understanding of knowledge differences between experienced and inexperienced auditors. Experienced auditors had not only more extensive knowledge of controls, as expected, but also organized their knowledge in memory differently. Thus, this study provides information about auditors' abilities to link errors and controls.

In a study closer to SAS No. 55, Brown and Solomon (1990) specifically focused on control risk assessments using configural (or combination pattern) knowledge to compensate and amplify controls. The auditors did use internal control information in a "configural" manner, suggesting that internal control risk assessment guidance should be sensitive to the *system* of internal controls. This evidence supports continued inclusion of the accounting system as part of the internal control structure, as defined by SAS No. 55 (and AU section 320).

Two recent papers (Waller 1990, 1992) investigated auditor assessments of both inherent and control risk across all five major assertions for three commonly material accounts—Trade Accounts Receivable, Inventory, and Trade Accounts Payable. In an experiment, Waller (1990) found judgmental dependence between inherent and control risk assessments, and a strong association between risk assessments across both inherent and control risk. The latter occurred despite the fact that the rate of detected misstatements varied significantly over the assertions. In an analysis of audit workpapers, Waller (1992) investigates the effects of second-order uncertainty (Waller and Felix 1984), or the evidence sufficiency of control risk assessments. He finds that auditors do address second-order uncertainty in control risk assessment, and that the contribution of separate assessments is an unresolved issue. The results of this study indicate that the call by Morton and Felix (1991) for clarification of the control risk definition is potentially important in the auditor's assessment and use of internal control risk.

Waller's papers also identify significant issues in applying SAS No. 55. Separate assessments of inherent risk and control risk present at least two problems (see also Kinney 1984). First, in both professional standards and the firm literature for the subjects in Waller's experiments there is substantial overlap in the factors to consider in assessing inherent risk and internal control risk. Thus, separation of inherent risk and control risk is ambiguous. Second, because control risk has both preventive and detective components, a probability theory-based decomposition is not possible unless preventive control risk and detective control risk are kept separate. He suggests that a combined "auditee" risk be assessed in place of separate assessments of control risk and inherent risk.

Finally, related to the overall thrust of SAS No. 55, Waller (1992) finds that there is considerable positive co-occurrence among and between misstatements in the assertions. For example, if overstatement is discovered in an earnings assertion for one account, it is likely to be accompanied by overstatements of earnings in other assertions or accounts. This implies that when the auditor becomes aware of misstatements, he or she should consider reevaluating the prior probability of misstatement (or the product of inherent risk and control risk) for other assertions and other accounts.

Kreutzfeldt and Wallace (1990) investigate the association between internal control risk assessments and detected errors. Their study was motivated by contradicting evidence in the early literature (see Willingham and Wright 1985). Kreutzfeldt and Wallace conclude that their data strongly suggest that control risk assessments are linked to errors at the account level (Waller 1992 elaborates on this linkage). They also note that joint consideration of inherent and control risk factors is useful.

Another issue is how auditors' control judgments should be combined. Libby and Libby (1989) obtained expert auditors' judgments about control risk for a set of cases. They then conducted experiments asking less expert auditors to evaluate the same cases. One group made global judgments about control risk and a second group made judgments about individual risk elements that were then combined using a mechanical algorithm to yield an overall risk assessment. Libby and Libby found that the individual risk assessments combined mechanically were closer to the experts' judgments than were the global judgments. This implies that global judgments of less experienced personnel may be improved through structure such as can be provided in professional standards, as well as the guidance of firms.

In two separate papers, Morton and Felix (1990, 1991) suggest that the ASB's combination of risk assessments and evidence sufficiency judgments in one construct, "assessed internal control risk" in SAS No. 55, was an unexpected and potentially confusing choice. The choice was unexpected because there is no literature indicating that such a combination is a sensible and efficient approach to considering the two elements. They suggest the choice may be confusing because the result is an auditing planning element that has different meanings in different contexts.

Analysis of Audit Policy Materials

To assess the implementation of SAS No. 55 in practice, we reviewed the audit practice and policy guidance statements of several large public accounting firms. Included were four Big Six firms and three firms from the second nine. We also reviewed the guidance in Practitioners Publishing Company's *Guide to Audits of Small Businesses* (Carmichael, McMurrian, and Anderson 1991), which is used by many smaller firms. Thus, we had input from a wide range of accounting firms.

Our review covered several topics, but we focus on the thirteen areas noted in tables 1 and 2. As might be expected, the results are mixed. Some problems or alleged problems seem to have been mitigated by SAS No. 55 and the audit guide, whereas others have not. And, some predictions of both the supporters and the detractors for SAS No. 55 are supported by our review, whereas others are not. Table 3 summarizes our findings.

TABLE 3 Score Sheet for Claims of Proponents and Opponents of SAS No. 55

	SAS No. 55	
	Successful	*Unsuccessful*
Proponents (Table 1)		
	Broader focus of control risk (CR) assessment	
	Assertions basis	
	EDP recognition	
	Less transaction compliance testing	
		Relation of control effectiveness to substantive tests
	Reduced implicit reliance on controls	
	Variable reliance on controls	
Opponents (Table 2)		
		Relation of control effectiveness to substantive tests
		"Evidence" ill-defined
		"Control risk" ill-defined
		Less rigorous control testing
		Efficiency unduly encouraged
		Overreliance on management representations encouraged

Supporters

We find successes for SAS No. 55 and the audit guide in resolving four of the five alleged difficulties caused by the wording of SAP No. 54 and AU section 320 (the first five issues in table 1). First, all manuals give attention to the control environment and the accounting system. As discussed in both sections above, it is arguable that aspects of the control environment relate to inherent risk and not to control risk. However, there is particular attention given to assessing the risk of management fraud and to the likely attention of management to any control deviations or fraud by employees. As to recognition of all possible types of errors, we *did not* find evidence that auditors are instructed to list systematically all possible errors. Furthermore, one firm has formally *reduced* the scope of its internal control work. Prior to SAS No. 55 it required the auditor to identify, document, and evaluate *basic controls* in the control environment. Now, the required work is limited to controls over completeness and accuracy of records.

Second, the policy guidance of all firms indicates an assertions-at-the-account-balance-level evaluation of control risk.[4] Third, there is evidence of increased attention to electronic data processing (EDP) and to lower control risk assessments due to EDP. All of the firms surveyed prescribe a separate workpaper section evaluating EDP. One Big Six firm that previously had used a transactions level approach defines EDP as "inherently reliable" under specified conditions, and has worksheets to help assess EDP features and controls for virtually all audits. Furthermore, the same guidance states that EDP should lead the auditor to focus on controls over EDP programmed controls and not on transactions directly. Although one could argue that technological change and not SAS No. 55 is the cause of the change, SAS No. 55 (especially the audit guide) encourages such an approach since the controls over controls (i.e., supervisory controls) may be relatively easy to test and may eliminate costly tests of controls over transactions. Finally, as discussed below, use of audit sampling in tests of controls is a "last resort" effort in six of the seven firms studied.

On the other side of the ledger, we find that the ties between control risk and substantive tests are still rather vague. Part of the problem may be in SAS No. 55 itself. For example, the Practitioners Publishing Company guide states: "The auditor's task in assessing control risk is to link control policies and procedures with assertions. SAS No. 55 provides *no* guidance on methods for establishing that link [emphasis added]."

Given the lack of linkage in the SAS, firms have developed their own. One second tier firm states simply that for *low* control risk, the auditor will

[4] Three firms have modified the approach by including "cutoffs" and "accuracy" along with the five assertions from SAS No. 31 to yield seven "objectives" for each account.

"typically rely on analytical procedures as the primary test." For *maximum* control risk, use of analytical procedures as the primary procedure will be limited, whereas for *moderate* risk, a blend of procedures is common. Interestingly, the same firm provides structured audit programs for moderate risk but requires that the auditor generate his or her own program for low and maximum risk. Thus, the auditor is encouraged to assess control risk at the moderate level. Further encouragement for a moderate risk assessment is offered in control testing. For moderate risk, firm policy states that control testing can be limited to a "walk-through" of three to five items selected from the accounting period.[5] Apparently this is a control test over the *design* of the system. There are *no required tests* to support an evaluation of moderate risk for "operating effectively." For an assessment of "low" control risk, a sample of fifty to sixty items is required, but the auditor can judgmentally evaluate whether the sample deviation rate is sufficiently below the tolerable deviation rate to justify the "low control risk" assessment. The auditor could decide that two, three, or even five or six deviations might be acceptable evidence that the population rate does not exceed 10 percent, for example.

Whether positive or negative, a trend away from audit sampling for control testing is obvious in all three of the Big Six firms reviewed. One states, "Examination of evidence, coupled with in-depth inquiry and observation, often provides sufficient evidence about the effective design and operation of controls without using sampling techniques." Further, the focus is on whether "individuals responsible for a control understand it and are diligent in its execution, and for computerized controls, . . . how the client ensures that it is properly implemented, maintained, and operated." This firm also states that inquiries, observations, and examinations of evidence are "normally sufficient" to assess whether the control is operating effectively. Cases of required reperformance of a procedure are not the normal case and no guidance is offered as to how such procedures are to be applied.

Another Big Six firm limits audit sampling for control testing to "possible use for testing manual controls if high reliance is to be placed on them" and the minimum sample size is set at twenty. For this firm, "a moderate degree of control satisfaction" can be obtained from a review of controls, "supplemented by a process of inquiry and observation, possibly including the tracing of a few items through the system (to provide evidence regarding the operating effectiveness)."

A third Big Six firm that prior to SAS No. 55 had strongly encouraged broad use of audit sampling, now has guidance that states: "Sampling is not

[5] On the other hand, the Practitioners Publishing Company's guide is very explicit in warning that walk-throughs "[r]arely provide enough evidence about operating effectiveness by themselves to allow reduced control risk assessment."

necessarily required for tests of controls." Rather, the judgment about control risk often "involves many control procedures operating together and does not necessarily require a separate judgment about a particular procedure." However, if sampling is deemed important for an individual procedure, then a sample of twenty-five is to be taken and a single deviation indicates that the procedure does not support an assessment of low control risk assessment. Thus, if sampling is used for control tests, the criteria for assessment is clear.

We find improvement in practice in the required consideration and documentation of controls for most of the firms surveyed. By focusing on assertions, the control environment, and the accounting system, there is at least some consideration of the reliance on controls to satisfy the completeness assertion and implicit reliance on controls is more explicit. In fact, one firm states that reliance on controls for completeness is often essential and may require a control risk assessment.

Finally, we find evidence that auditors are relying on controls to a varying degree. The most common classifications used by auditors are "maximum risk," "moderate risk" and "low risk." Some firms also use a "slightly less than the maximum" category. The latter category yields a 20 percent reduction in substantive sample size with very little auditor effort at control risk assessment. This level is a new one for the firm (i.e., new with SAS No. 55) and it should be noted that "maximum" means 1.0 risk or *no* control reliance for this firm. For some other firms, the "maximum" risk is clearly less than one. Thus, substantive tests and achieved audit risk will vary across firms even when they agree that control risk is at the "maximum."

Opponents

As to the critics of SAS No. 55, we find that their concerns were justified (at least the six listed in table 2). There is now no confusion about the meaning of *compliance* tests (since the term has been deleted), but, there is now confusion about *control* tests and how they are to be considered. The varying interpretations are especially apparent for tests of whether controls are operating effectively. For example, one firm warns against overreliance on management inquiry for evidence about "operating effectively," whereas two other firms require *no* tests for effectiveness if the assessment is moderate risk. In contrast to the latter two, the smaller firm's guidance was particularly strong in warning that inquiry and observation are persuasive only while the auditor is present, and that "persuasiveness of evidence from prior audits is limited because effectiveness may have changed."

A review of the policy guidance clearly indicates that many auditors have reduced the extent and relaxed the nature of control testing. This comes in three forms. One, given increased emphasis on EDP and programmed

controls, detailed sampling of individual controls is properly reduced. This may be in part balanced by more testing of the design and operating effectiveness of EDP controls and supervisory controls (i.e., supervisory controls over transaction controls). Second, we found many references to "inquiry" and "observation" of control procedures and relatively little about "reperformance." Thus, risk of overreliance on controls that are not operating effectively may be increased. Third, as discussed above, we did not find any firm that requires (or even encourages) audit sampling for control tests.

The emphasis on audit efficiency in SAS No. 55 is also evident in the firms' guidance on the relation among controls. As examples, one firm states "certain controls over completeness and existence may also reduce the risk of cutoff errors at year end," and "information used to make valuation judgments may be subject to controls. . . [and] . . . may provide evidence about the reliability of that information, thus reducing the evidence needed from other tests."

As to the linkage of control risk to the substantive audit, there appears to be a trend away from audit sampling and tests of details.[6] One firm's guidance states that "normally" it is not necessary to perform substantive tests of details of transactions in the income statement. Rather, when the risk of material misstatement is not high, the balance sheet work and analytical procedures provide the necessary assurance.

One concern about SAS No. 55 was that credit would be taken for a "good attitude" toward internal control (Carmichael 1987; Kinney 1988). We did not find firm guidance references to control risk reduction for good attitude alone. On the positive side, one Big Six firm now states that in a good control environment the "evidence obtained by inquiry of client personnel is more persuasive." The same guidance also cautions the auditor that inquiry ordinarily will not support reliance on effective operation of a control procedure. On the other side, we did not find similar cautions in the other firms' guidance. Nor did we find cautions about the co-occurrence of errors problem documented in Waller (1992).

We were unable to locate any comprehensive transition documents bridging the firms' guidance from AU section 320 to SAS No. 55. This would have been helpful in determining at least the initial interpretation of the new guidance and how it might affect practice. We did get contemporaneous input from one Big Six partner who called us when his firm's guidance was changed. He said, "Bill, you will be interested to know that our firm has just issued new guidance that substantially *reduces* the amount

[6] Concerning the linkage, the Practitioners Publishing Company guide states: "The auditor's task in assessing control risk is to link control policies and procedures with assertions. SAS No. 55 provides *no* guidance on methods for establishing that link [emphasis added]."

of auditing that our personnel are required to do." Bill said, "Really, what do you call it?" He responded, "We call it 'implementing SAS No. 55,' but the effect is to reduce our required effort in order to be competitive."

Conclusions

In conclusion, based on our review of the objectives and the guidance of SAS No. 55, we find that implementation has had mixed success at best. Clearly, there is more attention being given to assertions at the account balance level, to documenting the control environment and accounting system, and to reliance on supervisory controls including EDP-based controls. Also, there is a broader focus overall for control risk assessment. This reliance on a combination of controls is probably well placed.

There is still confusion about what *control* tests mean, especially tests of operating effectiveness, and about the links between controls and substantive tests. Also, it is clear that there is more flexibility allowed in control testing to support an assessment of low control risk than was required for a "high-reliance" assessment under AU section 320. There is great variation in the basis for a "moderate-risk" assessment.

It is difficult to determine whether SAS No. 55 and the related audit guide have improved audit practice on the average. Audits should be better in that a broader range of risk factors is being considered at the planning stage. However, this possible improvement may be more than balanced by less rigorous control testing and looser links to substantive tests.

There is considerable risk that the *variance* of audit practice has been increased by SAS No. 55, especially given recent competitive pressures to lower audit fees. Different interpretations of the minimum requirements for determining operating effectiveness of controls can lead to dramatic differences in the audit effort expended on control risk assessment. In turn, there will be different levels of detection risk with a final result of different levels of achieved audit risk.

Since audit quality is not easily observed in the short run, any large differences in average audit effort across audit firms may drive high-quality auditors out of business. In the long run, the low-quality auditors may also fail due to unmet expectations. We remain concerned that reliance on more general, subjective, and impressionistic control risk assessments may lead to significant variation (if not reduction) in audit effectiveness.

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The purpose of this paper is to review the relevant research, litigation, and state of practice to determine if SAS No. 53 has been successful in narrowing the expectation gap with respect to auditors' responsibilities to detect and report errors and irregularities. The paper concludes that SAS No. 53 can be successful if (1) users, the SEC, and the courts accept SAS No. 53 as defining the auditor's responsibility to detect and disclose fraud or (2) if SAS No. 53 effectively changes the way auditors conduct audits so that audits actually provide "reasonable assurance" that irregularities have been detected. The evidence concerning both possibilities seems rather negative. Indeed, SAS No. 53 contains three limiting caveats that appear to be unacceptable to users, the SEC, and the courts. Accordingly, lawsuits against accountants appear not to have decreased. In addition, the quality of an audit is being questioned today more than ever. Users' expectations of auditors to detect fraud appear to be deeply rooted in the profession's earlier undertakings to detect fraud. Changes made by auditors because of SAS No. 53 appear to be rather cosmetic at best. In addition, this paper provides empirical evidence about the effectiveness of the risk factors identified in SAS No. 53 in identifying financial statements where material misstatement is likely.

Statement on Auditing Standards (SAS) No. 53 provides guidance on the independent auditor's responsibility for the detection of errors and irregularities in the audit of financial statements. It was effective for audits of financial statements for periods beginning on or after January 1, 1989. One of the purposes motivating its issuance was the need to narrow the expectation gap between what independent auditors actually do and what the users of financial statements perceive that they do.

The purpose of this paper is to review the relevant research, litigation, and state of practice to determine if SAS No. 53 has been successful in narrowing the expectation gap with respect to errors and irregularities. In meeting this objective, the paper is divided into ten sections. In the first, the relevant parties (players) involved in the expectation gap controversy are identified. In the second, a brief history of auditing standards relating to errors and irregularities is presented. In the third, SAS No. 53 is analyzed to determine how it differs from previous standards and what promise it holds to close the expectation gap. In the fourth, the guidance provided in SAS No. 53 to identify risk factors that may signal financial statement fraud are examined and empirical research that tested their reliance is presented. In the fifth, evidence concerning whether auditors have changed their practice because of SAS No. 53 is presented. In the sixth, evidence regarding the views of the public—one of the primary groups of users of audits—about SAS No. 53 is discussed. In the seventh, evidence describing the views and expectations of the Securities and Exchange Commission (SEC) with respect to errors and irregularities are discussed. In the eighth, lessons learned about SAS No. 53 from lawyers' perceptions are presented. In the ninth, litigation evidence relating to SAS No. 53 issues is presented. The paper concludes with a short summary and implications for the profession.

Parties Involved in the Expectation Gap Controversy

There are five primary parties (players) involved in the expectation gap controversy. On one side are (*1*) the AICPA with its professional standards and (*2*) practicing independent auditors. Together, these groups promulgate auditing standards that articulate the necessary care that must be exercised when conducting an audit and issues audit opinions used by the public.

On the other side are three independent groups: (*1*) the public, usually represented by investors and creditors, (*2*) the SEC, to which all public companies must report, and (*3*) the courts, which make determinations, usually in civil cases, about whether auditors have been negligent in conducting an audit and/or whether or not they should pay penalties to plaintiffs (usually investors and creditors) who have suffered damages.

Each of these five groups has had significant input in determining the level of responsibility an auditor has to detect errors and irregularities when conducting an audit. The public, usually through opinion polls and editorials, has stated its position about auditors' responsibilities to detect irregularities. The SEC, through various releases, has also stated its position about auditors' responsibility to detect irregularities. The courts, through their rulings in numerous cases where the quality of auditors'

work has been questioned, have made determinations as to the extent of responsibility an auditor has to detect irregularities.

As will be discussed, the positions of the public, the SEC, and the courts have been relatively consistent over time. The position of the AICPA and auditors, on the other hand, has been quite fluid, changing considerably over time. Thus, for purposes of this paper, the expectation gap is the perceived difference between the three parties (public, SEC, and courts) and the public accounting profession (AICPA and auditors) with respect to an auditor's responsibility to detect errors and irregularities while conducting an audit in accordance with generally accepted auditing standards (GAAS).

Auditors' Responsibility to Detect Errors and Irregularities: A Brief History

During the early part of this century there was universal agreement, even among auditors, that the detection of fraud (irregularities) was one of the primary purposes for conducting an audit of financial statements. Indeed, as noted in Carmichael and Willingham (1971), the function of detecting fraud is deeply rooted in the historical role of auditors, dating back to the early 1500s. As late as the 1930s, most auditors emphasized the detection of fraud as a primary purpose of an audit. Mautz and Sharaf (1961) stated, "Until recently there was substantial acceptance of the idea that an independent audit had as one of its principal purposes the detection and prevention of fraud and other irregularities." An early edition of Montgomery[1] listed three objectives of the audit: (*1*) "The detection of fraud," (*2*) "The detection of technical errors," and (*3*) "The detection of errors in principle."

By the late 1930s, there was a very visible change in the auditing profession's willingness to accept responsibility for detecting fraud as a purpose of an audit of financial statements. This revolutionary change culminated in the issuance of Statement on Auditing Procedure (SAP) No. 1, *Extensions of Auditing Procedure*.[2] SAP No. 1 contained the following statement:

> The ordinary examination incident to the issuance of financial statements accompanied by a report and opinion of an independent certified public accountant is not designed to discover all defalcations, because that is not its primary objective, although discovery of defalcation frequently results. . . .To exhaust the possibility of

[1] Carmichael and Willingham, p. 7 (citing R.H. Montgomery, *Auditing Theory and Practice*, 1912). This provision also appeared in Montgomery's second (1923) and third (1927) editions.

[2] Sullivan, Gnospelius, Defliese, and Jaenicke, pp. 121–122.

> exposure of all cases of dishonesty or fraud, the independent auditor would have to examine in detail all transactions. This would entail a prohibitive cost to the great majority of business enterprises—a cost which would pass all bounds of reasonable expectation of benefit or safeguard therefrom, and place an undue burden on industry.[3]

Since the issuance of SAP No. 1, the profession has struggled, some would say without much success, to refine and articulate its position on detecting irregularities and to establish standards that are capable of convincing users that auditors should have only a limited role in detecting fraud.

During the late 1950s, SAP No. 1 and the profession came under vigorous attack and pressure mounted for the AICPA to consider its official position as stated in SAP No. 1. The AICPA's response was to issue a new standard, SAP No. 30, *Responsibilities and Functions of the Independent Auditor in the Examination of Financial Statements*, in 1960. SAP No. 30 was viewed by many as being unresponsive to user concerns because it added no new responsibility to detect fraud. Specifically, SAP No. 30 stated an auditor's responsibility to detect irregularities as follows:

> The ordinary examination incident to the expression of an opinion on financial statements is not primarily or specifically designed, and cannot be relied upon, to disclose defalcations and other similar irregularities, although their discovery may result. Similarly, although the discovery of deliberate misrepresentations by management is usually more closely associated with the objective of the ordinary examination, such examination cannot be relied upon to assure its discovery.[4]

Although the standard did stress that an auditor had an obligation to "be aware of the possibility that fraud may exist," it also made it clear that an auditor had no affirmative responsibility to go beyond that minimum duty and design tests that would detect fraud. As Costello (1991) states, "Indeed, the language contained in SAP No. 30 was so negatively stated that it justifiably led auditors to conclude they had little or no obligation to structure their tests to detect fraud." Because the goal of a GAAS audit is to determine if the financial statements conform to generally accepted accounting

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[3] As stated by Costello (p. 272), the fact that this standard cut across the grain of common understanding concerning the role of auditors has had a troublesome significance for the profession. The public's expectations today are still deeply rooted in the profession's earlier undertakings to detect fraud. Costello believes that because of the earlier stated purpose to detect fraud, attempts by the profession to renounce or amend those undertakings may ultimately prove futile. As he states, "As a minimum, more will be required than the promulgation of new and often esoteric standards which fail to reach the public consciousness."

Statement on Auditing Procedures No. 30, paragraph 5.

principles (GAAP), even strict adherence to GAAS would have provided little assurance that fraud would be detected. As Carmichael and Willingham (1971) stated, SAP No. 30 failed as the controlling standard for auditors because it was regarded by many auditors as an inadequate vehicle to avoid liability. The courts appeared to ignore SAP No. 30 and allowed numerous actions to be brought against auditors for failing to detect and disclose fraud.[5]

Although the courts were holding auditors responsible for failing to detect fraud, it took the Equity Funding Case and its associated scrutiny of the profession to determine that SAP No. 30 was inadequate. Because of Equity Funding, in 1975, an AICPA committee was established to re-examine the auditor's responsibility to detect management fraud. That committee concluded that "no substantive change in the degree of responsibility was necessary."[6]

The Cohen Commission (comprised largely of non-AICPA members) reached a different conclusion. According to the Cohen Commission, the auditor:

> . . . has a duty to search for fraud, and should be expected to detect those frauds that the examination would normally uncover.

They went on to say that

> . . . users of financial statements should have a right to assume that audited financial information is not unreliable because of fraud. . . . An audit should be designed to provide reasonable assurance that the financial statements are not affected by material fraud.[7]

In 1977, SAS No. 16, *The Independent Auditor's Responsibility for the Detection of Errors or Irregularities*, was issued, which admitted some obligation to search for fraud in the normal course of a GAAS audit. As stated in SAS No. 16:

> The independent auditor's objective in making an examination of financial statements in accordance with (GAAS) is to form an opinion on whether the financial statements present fairly financial position, results of operations, and changes in financial position in conformity with (GAAP). . . . Consequently, under (GAAS), the

[5] During the period SAP No. 30 was effective, actions against auditors became quite common. Some of the more famous cases litigated during this period include *Schact* v. *Brown*, *Cenco Inc.* v. *Seidman & Seidman*, *United States* v. *Simon*, *United States* v. *White*, *Fischer* v. *Kletz*, *Western Surety Co.* v. *Loy*, *Lincoln Grain, Inc.* v. *Coopers & Lybrand*, *Rosenblum* v. *Adler*, *National Surety Corp.* v. *Lybrand*, *Maduff Mortg.* v. *Deloitte Haskins & Sells*, and *Bonhiver* v. *Graff*.

[6] Treadway Report, p. 50.

[7] Cohen Commission Report, p. 36.

> independent auditor has the responsibility, within the inherent limitations of the auditing process, . . .to plan his examination to search for (material) errors and irregularities.[8]

Although SAS No. 16 required the auditor to "search for" fraud, it did not require the auditor to "detect" fraud. Even after SAS No. 16, auditors remained unwilling to accept or even acknowledge a substantial responsibility to detect fraud. SAS No. 16 contained some of the same kinds of "defensive and qualifying" language that was included in SAP No. 1 and No. 30. Phrases such as "inherent limitations of the auditing process" and "unless the auditor's examination reveals evidentiary matter to the contrary, his reliance on the truthfulness of certain representations and the genuineness of records and documents obtained during the examination was reasonable" allowed auditors to justify an unwillingness to detect fraud. Madison and Ross (1990) stated that "the language of SAS No. 16 was ambiguous. It did not provide adequate guidance and therefore did not meet the needs of the accounting profession or the business community." Costello (1991) agrees when he states "These qualifying provision(s) undermined the integrity of SAS No. 16 and rendered any requirement that an auditor was obligated to search for management fraud virtually meaningless. . . .Consequently, under SAS No. 16, substantial reliance on the audit by users of the financial statements to detect management fraud would have been unwarranted."

SAS No. 53: Does It Solve the Problem?

By the mid-1980s it was obvious that SAS No. 16 was not doing the job and that auditors' unwillingness to accept increased responsibility to detect fraud was increasing the expectation gap. "Many corporate and banking debacles once labeled as 'business failures' were increasingly being dubbed 'audit failures,' a situation shamefully underscored by an epidemic of lawsuits leveled against auditors for, among other things, failing to uncover and disclose management fraud" (Costello, 1991). The public, the courts, and even Congress demanded that auditors accept a greater responsibility to detect irregularities. In 1988, SAS No. 53, *The Auditor's Responsibility to Detect and Report Errors and Irregularities*, was issued.

SAS No. 53 differs from SAS No. 16 in that it requires an auditor to "design the audit to provide reasonable assurance of detecting errors and irregularities." It also requires auditors to "exercise. . .the proper degree of professional skepticism to achieve reasonable assurance that errors and irregularities will be detected." Unlike prior standards, this

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[8] Statement on Auditing Standards No. 16, paragraph 5.

professional skepticism requires the auditor to assume management is neither honest nor dishonest.

SAS No. 53 holds out two possibilities for reducing the expectation gap. First, it will result in a narrowing of the gap if users (including investors and creditors), the SEC, and the courts accept the standard as defining the auditor's responsibility to detect and disclose fraud. Indeed, if CPAs can now be assured that compliance with SAS No. 53 insulates them from further liability and scrutiny, the standard has been successful. Second, SAS No. 53 will help close the expectation gap if it effectively changes the way auditors conduct audits so that audits actually provide "reasonable assurance" that irregularities have been detected. This latter solution would require a change in audit approach to be successful. The first case requires user expectations to change; the second requires that auditors change their attestation behavior.

Guidance Provided by SAS No. 53

Before discussing any changes in auditors' attestation behavior, some evidence about the effectiveness of the guidance contained in SAS No. 53 must be discussed. If the twenty-one factors listed in SAS No. 53 that should be considered in combination to assess the risk that irregularities may cause the financial statements to contain a material misstatement are not the set of factors that should be considered, a change in the way auditors conduct audits will be ineffective in assessing this risk. In addition, SAS No. 53 includes no guidance for the auditor about the importance of each risk factor. How does the auditor combine the factors? How much weight should be given to each?

KPMG Peat Marwick initiated research to tackle two problems: relevance of the factors presented in SAS No. 53 and the question of how they should be combined.[9] The research studies concentrated on management fraud (i.e., fraudulent financial statements). Judgments about the presence or absence of "red flag" indicators were collected from engagement partners on seventy-seven fraud cases and 305 nonfraud cases. The relevant fraud indicators were then combined using a statistical model.

Table 1 lists the auditor judgments about the presence of the twenty-one SAS No. 53 indicators of management fraud in both fraud and nonfraud companies. Eight of the factors listed in the SAS are not statistically significant indicators of fraud. Table 2 lists auditor judgments about the presence of fraud indicators not included in SAS No. 53 that were obtained by searching the management fraud literature. There are nine red flags in

(continued on page 113)

[9] KPMG study of SAS No. 53 risk factors.

TABLE 1 Auditor Judgments for Factors From SAS No. 53

Factors From SAS No. 53	*Fraud Cases (N=77)*		*Nonfraud Cases (N=305)*		
	Present	*%*	*Present*	*%*	
• Weak Internal Control Environment	50	64.9	47	15.4	
Management Characteristics					
• Management decisions dominated by a single person or small group	67	87.0	195	63.9	
• Management's attitude unduly aggressive	28	36.4	13	4.3	
• Management turnover is high	7	9.1	18	5.9	Not Significant
• Management places undue emphasis on earnings projections	28	36.4	14	4.6	
• Management's reputation in the business community is poor	10	13.0	6	2.0	
Operating and Industry Characteristics					
• Inadequate profitability relative to industry	30	39.0	35	11.5	
• Sensitivity of operating results to economic factors is high	24	31.2	83	27.2	Not Significant
• Rate of change in industry is rapid	30	39.0	75	24.6	Not Significant
• Industry is declining with many business failures	25	32.5	59	19.3	Not Significant
• Organization is decentralized without adequate monitoring	9	11.7	6	2.0	
• Doubts about entity's ability to continue as a going concern	23	29.9	30	9.8	
Engagement Characteristics					
• Many contentious or difficult accounting issues	26	33.8	57	18.7	
• Significant difficult-to-audit transactions or balances are present	32	41.6	21	6.9	
• Significant and unusual related party transactions are present	22	28.6	77	25.3	Not Significant

(continued)

TABLE 1 Auditor Judgments for Factors From SAS No. 53 *(continued)*

	Fraud Cases (N=77)		*Nonfraud Cases (N=305)*		
Factors From SAS No. 53	*Present*	*%*	*Present*	*%*	
• Misstatements detected in prior period's audit	4	5.2	5	1.6	Not Significant
• New client with no prior audit history or sufficient information not available from predecessor auditor	15	19.5	29	9.5	Not Significant
Other Red Flags From Paragraph 12					
• Management has been overly evasive when responding to audit inquiries	30	39.0	9	3.0	
• Management has engaged in frequent disputes with auditors	16	20.8	6	2.0	
• Compensation arrangements are based on recorded performance	15	19.5	35	11.5	Not Significant
• Accounting personnel exhibit inexperience or laxity in performing duties	32	41.6	34	11.2	

TABLE 2 Auditor Judgments for Additional Factors

Additional Factors	*Fraud Cases (N=77)*		*Nonfraud Cases (N=305)*		
	Present	*%*	*Present*	*%*	
Conditions					
• Company entered into one or an aggregate of material transactions	19	24.7	56	18.4	Not Significant
• Company involved in purchase, sale, or merger of/with another company	3	3.9	85	27.9	Wrong Sign
• Company recently entered into a significant number of acquisition transactions	1	1.3	19	6.2	Not Significant
• Company is in a period of rapid growth	34	44.2	41	13.4	
• Company has inexperienced management	15	19.5	18	5.9	
• A conflict of interest exists within the company and/or its personnel	12	15.6	7	2.3	
Motivation					
• There are adverse conditions in the client's industry	30	39.0	136	44.6	Not Significant
• Company is subject to significant contractual commitments	18	23.4	56	18.4	Not Significant
• Company is confronted with adverse legal circumstances	11	14.3	14	4.6	
• Company holdings represent a significant portion of management's personal wealth	7	9.1	99	32.5	Wrong Sign
• Management personnel perceive their jobs are threatened by poor performance	10	13.0	49	16.1	Not Significant
Attitude					
• Officers of the company have entered into collusion with outsiders	1	1.3	1	0.3	Not Significant

(continued)

TABLE 2 Auditor Judgments for Additional Factors *(continued)*

Additional Factors	*Fraud Cases (N=77)*		*Nonfraud Cases (N=305)*		
	Present	*%*	*Present*	*%*	
• There is need to cover up an illegal act	1	1.3	5	1.6	Not Significant
• Auditor's experience with management indicates a degree of dishonesty	21	27.3	6	2.0	
• There is undue concern with the need to maintain or improve the reputation/image of the company	1	1.3	28	9.2	Not Significant
• Management displays a propensity to take undue risks	4	5.2	7	2.3	Not Significant
• Management personnel engage in an inappropriate lifestyle	2	2.6	3	1.0	Not Significant
• Top management is considered to be highly unreasonable	4	5.2	5	1.6	Not Significant
• Management displays a significant lack of moral fiber	4	5.2	7	2.3	Not Significant
• Client personnel exhibit strong personality anomalies	8	10.4	0	0.0	
• Management places undue pressure on the auditors	14	18.2	12	3.9	
• Management has engaged in opinion shopping	7	9.1	1	0.3	
• Management displays a hostile attitude toward the auditors	1	1.3	6	2.0	Not Significant
• Management displays significant disrespect for regulatory bodies	7	9.1	4	1.3	
• Management displays significant resentment of authority	1	1.3	5	1.6	Not Significant

this list not included in SAS No. 53 that appear to be indicators of management fraud. When assessed individually, SAS No. 53 includes some red flags that appear to be poor indicators of management fraud and excludes some red flags that are good indicators of fraud.

The weight that should be assigned to each relevant fraud indicator is a very complex problem. Ultimately, a complex set of statistical models was used by KPMG researchers to determine weights. Based on the research results, guidance about a combination of fraud indicators is beyond the capability of an SAS.

Have Auditors Changed the Manner in Which Audits Are Conducted as a Result of SAS No. 53?

The evidence as to whether or not SAS No. 53 has caused a change in the way audits are conducted is skimpy and mixed. According to a recent survey by the New York insurance broker Johnson & Higgins (Caprino 1990), four out of five certified public accountants have cut back on the services they provide. The poll of 500 accountants nationwide showed that 56 percent have ceased doing business with clients considered at "high risk" for initiating lawsuits, and 98 percent ask clients to sign protective contracts before work begins. It is not clear whether it has been the increased fraud-detection requirements of SAS No. 53 or the fear of lawsuits that has motivated CPAs to be more cautious. Certainly one way to provide "reasonable assurance" that fraud does not exist is not to accept high-risk clients.

On the other hand, Madison and Ross (1990) do not believe that SAS No. 53 has caused a change in the way audits are conducted. In their article, they ask the question "does anyone who is familiar with the audit planning and development procedures of the larger accounting firms really think this requirement (SAS No. 53) represents a substantive change from existing practice?" The response they received to this question from three firm partners in charge of practice unit audit operations was that their firm's reactions were largely in the semantics of the audit programs and planning meeting agenda. It was their opinion that no substantive changes would occur in the actual audit procedures or applications. Madison and Ross (1990) go on to conclude that ". . .one would logically presume this would generally be the reaction in most of the larger accounting firms."

Does SAS No. 53 Satisfy the Public's (Investors and Creditors) Expectations of the Auditor's Responsibility to Detect Irregularities?

The public's perception of auditor responsibility to detect and disclose irregularities has not changed over time. The public has always expected

auditors to detect *all* financial statement fraud. This expectation has been restated several times. A 1974 poll conducted by Opinion Research Corporation (1974) for Arthur Andersen & Co. revealed that "66 percent of the investing public believe that the audit is *conducted primarily to uncover fraud*." The poll also revealed that most segments of the public expect auditors to detect management fraud.

This same expectation was restated in a subsequent poll conducted by Louis Harris and Associates, Inc. in 1986 for the AICPA. That poll stated that "solid majorities of all the principal public groups are convinced that a 'clean' opinion also means that the auditing firm *has found no fraud*."

After studying auditor litigation and audit service quality, Palmrose (1988) concluded that the value of extended audits stems from financial statement users' expectations that auditors will detect and correct (or reveal) any material misstatements or omissions of financial information.

The Dingell Committee (1986) expressed its findings by noting, "The public expects that the independent auditors will make reasonable efforts to assure that fraudulent corporate activity will not go undetected or unreported." The Dingell Committee subsequently initiated a bill that would have required auditors to perform "specific and substantial procedures to reasonably ensure the detection. . .of any material fraud."

Although SAS No. 53 does acknowledge an affirmative duty to detect fraud, it probably will not satisfy the "public." Whereas the public requires the detection of "all material financial statement fraud," SAS No. 53 contains at least three limiting caveats. First, SAS No. 53 limits the auditor's responsibility to detect fraud where the fraud is concealed by management collusion and forgery. As SAS No. 53 states, "because of the characteristics of irregularities, particularly those involving forgery and collusion, a properly designed and executed audit may not detect a material irregularity." Second, SAS No. 53 appears to limit the auditor's responsibility to design the audit to detect fraud where there are no suspicious circumstances suggesting that fraud might be present. SAS No. 53 states, for example, that the auditor at the beginning of each audit engagement should "design the audit to provide reasonable assurance of detecting errors and irregularities that are material to the financial statements." However, according to the standard, the audit "design," including setting the scope of the audit and designing specific audit tests, should be formulated based on an assessment of the "risk that [fraud may exist] may cause the financial statements to contain material misstatements." A reasonable interpretation by an auditor would lead him or her to believe that the responsibility to detect fraud is relieved when the risk assessment for a particular client provides no indication that fraud may be present.

The third limiting caveat of SAS No. 53 places substantial limitations on the auditor's obligation to disclose fraud to the investing public once fraud has been detected. As stated in SAS No. 53, "disclosure of irregularities to

parties other than the client's senior management and its audit committee or board of directors is not ordinarily part of the auditor's responsibility. . . ." In addition, the standard goes on to say that such disclosure ". . .would be precluded by the auditor's ethical or legal obligations of confidentiality." The standard provides three circumstances when an irregularity can be disclosed: (1) to the SEC and a successor auditor where there is a change in auditors, (2) in response to a subpoena, and (3) to a governmental agency when the audit is conducted in accordance with requirements for the audits of entities that receive financial assistance from a government agency.

All three of these limiting caveats are contrary to the expectations of the public who expect *all fraud* to be detected and disclosed. As a result, unless auditor actions change as a result of SAS No. 53 in ways that will detect all fraud, it is doubtful that the standard will narrow the expectation gap with respect to the "public."

Does SAS No. 53 Satisfy the SEC's Perception of the Auditor's Responsibility to Detect and Disclose Irregularities?

Similar to the public's position, the SEC's perception of auditor responsibility to detect fraud has remained constant over time. The SEC views the detection of fraud as a major purpose of the audit. Probably the first public statement by the SEC about the fraud detection responsibilities of an audit was Accounting Series Release (ASR) No. 19, *In the Matter of McKesson & Robbins, Inc.*, issued in 1940, wherein they stated:

> . . .accountants can be expected to detect gross overstatements of assets and profits whether resulting from collusive fraud or otherwise. . .we feel that the discovery of gross overstatements in the accounts is a major purpose of such an audit even though it be conceded that it might not disclose every minor defalcation.

In 1974, in response to the Equity Funding case, the SEC issued ASR No. 153 (1974) in which it restated its position on the auditor's responsibility to detect and disclose management fraud in exactly the same terms used in ASR No. 19. In addition, in his first speech after being named as the current SEC enforcement director, William McLucas outlined several areas of stepped up SEC attention. In doing so, he warned auditors that "you should assume the division of enforcement will take a look at you to be certain that . . . independent auditors are aggressive in preventing fraud at corporations" (Salwen 1990).

Nowhere is there evidence that the SEC accepts any of the limiting caveats in SAS No. 53. Since 1940, its stated position has been that auditors should detect and disclose *all material financial statement fraud.*

Does SAS No. 53 Satisfy the Court's Perception of Auditors' Responsibility to Detect and Disclose Irregularities?

It does not appear that SAS No. 53 satisfies lawyers' perception of auditor responsibility to detect and disclose fraud. As stated by Costello (1991):

> Lawyers representing CPAs inevitably will be asked to advise their clients on whether compliance with SAS No. 53 will be an effective tool for avoiding liability in the area of management fraud. Their advice should be simple. Neither GAAS nor SAS No. 53 constitute the controlling measure of an auditor's liability. The door remains open in auditor malpractice suits for plaintiffs to introduce evidence indicating that the auditor should have done more than the profession's self-imposed standards dictated. Complicating the situation is that the auditor's obligations for detecting and disclosing fraud under SAS No. 53 fall short of those previously imposed on auditors by the courts. Perhaps the best advice for auditors is to design their audits to detect all forms of fraud, regardless of the cause and regardless of whether suspicious circumstances are present. Further, to the degree that courts perceive CPAs as owing their allegiance to the investing public and view the public's right to know as outweighing the auditor's ethical obligations of confidentiality, CPAs may, under certain circumstances, find compliance with the fraud disclosure provisions under SAS No. 53 inadequate protection from liability.

Costello makes a very persuasive argument that professional standards, such as SAS No. 53 can never be dispositive in deciding whether a defendant exercised due care.[10] As stated by Costello, "professional standards should not and do not replace the role of the jury in determining either what constitutes due care or whether, under the particular circumstances, the defendant exercised that due care." Therefore, although a CPA defendant may establish compliance with SAS No. 53, he or she does not thereby establish as a matter of law that due care was exercised. Attorneys argue that allowing professional standards to play a conclusive evidentiary role would reduce a jury to "...the mechanical process of applying the self-imposed

[10] The only exception to this rule is in the medical profession, where medical standards are generally considered the controlling measure of liability in medical malpractice cases. In medical malpractice cases, failure to establish non-conformity is fatal to the plaintiff and the defendant who establishes conformity is entitled to a directed verdict. The same cannot be said for auditors. Costello was unable to locate a single court decision directing a verdict for the auditor merely upon a showing of compliance with the auditing standards.

standards of the defendant's profession." Furthermore, they argue that if professionals, such as auditors were to have their esoteric standards define the measure of liability for the profession's members, a two-tier system of justice between the haves (professionals) and the have-nots would be created (Morris 1942).

Costello very eloquently traces the legal precedence through such auditor-liability cases as *Escott* v. *Bar Chris Construction Corp.*, *Rhode Island Hospital Trust National Bank* v. *Swartz, Bresenoff, Yauner & Jacobs*, and *Maduff Mortgage Corporation* v. *Deloitte Haskins & Sells* to show that auditor negligence is a matter for courts to decide, not professional standards. As was stated in the latter case:

> The AICPA standards are only evidentiary. . .They are principles and procedures developed by the accounting profession itself, not by the courts or the legislature. They may be useful to a jury in determining the standard of care for an auditor, but they are not controlling. The amount of care, skill and diligence required to be used by defendants in conducting an audit is a question of fact for the jury, just as it is in other fields for other professionals.[11]

The result is that as long as the professional standards for detecting and disclosing irregularities differ from the public's expectations, failure to detect fraud by auditors will be litigated. And, it appears that SAS No. 53 differs considerably from those public expectations.

The Litigation Evidence

While it is too early to establish a clear trend and know for certain what the impact of SAS No. 53 has been on litigation, there is no evidence that the number of lawsuits against accountants is decreasing. As is shown in table 3, most of the cases being reported in recent public reports as being filed, settled, or litigated are for years prior to the effective date of SAS No. 53. Table 3 represents a cross-section of auditor liability suits discussed in the current popular press. Most likely, it will take four or five more years before lawsuits filed for 1989, 1990, and 1991 are litigated and/or settled.

There is some evidence, however, that lawsuits against accountants are on the rise. Caprino (1990) states "lawsuits targeting accountants—filed by businesses challenging audits or shareholders claiming to have received faulty financial information—are on the rise, and the threat of litigation is

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[11] *Maduff Mortgage Corp* v. *Deloitte Haskins & Sells*, p. 502.

TABLE 3 Sampling of Recent Litigation

Year of Problem	Year Reported in News	Suit Filed	Settled In Court	Settled Out of Court	Acctg. Firm	Company Audited
91	91	x			EY	Mutual Benefit Life
	89		x		EY	Bradford White Corp.
87	91			x	EY	Lincoln Savings and Loan
83–88	91	x			EY	Republic Bank Corp.
86	90	x			DT	Southeastern Insurance Group Inc.
88	90	x			DT	Poly-Dura Inc.
86	91			x	DT	Inter-Regional Financial Group
	90	x			DT	Baker's PTL Ministry
85, 86	91	x			DT	Frank B. Hall & Co. Inc.
88	90	x			PM	Scottish Heritable Inc.
87	89	x			CL	Insurance Exchange of America
87	89	x			CL	Thomas McKinnon Inc.
88	90	x			CL	Stotler Group Inc.
79–84	90		x		S	Universal Casualty & Surety Co.
87	91	x			EY	4 Tennessee Savings and Loans
85, 86	91	x			PW	United Bank of Arizona
86	90			x	CL	Silverado
85	90		x		EY	FP Investments
84	90	x			EY	Western Savings Association
88	90	x			DT	Beverly Hills Savings
83, 84	90	x			DT	Sunrise Savings
		x			GT	Sunbelt Savings of Dallas
		x			GT	Rooks County Savings
		x			CL	First Federal S&L of Shawnee
82	91	x			AA	Indutril Tectonics
80	90	x			PW	AM International
85	90	x	x		EY	Small World Greetings
82–86	91				PW	Brictard & Co.
81	90			x	DT	Inter Regional Financial
80	89		x		LH	Herman Fiesod
85	90			x	CL	Overseas Trust Bank
	90			x	PM	Penn Square Bank
	90		x		PM	Holt Leasing
	90		x		MH	Continental Illinois
	89				CL	Inland Power & Light Co.
	91	x			DT	Columbia Savings & Loan
84–91	91	x			DT	First Executive
	90	x			PM	Central Bank
88–90	91	x			DT	FNN
	91	x	x		EY	W. L. Jackson
89	90	x			PM	Eagle Trust
90	91	x			EW	Monarch
	91				DT	First South
	91	x			EW	Imperial Savings Assoc.
	91				DT	Commonwealth Federal

Legend: EY—Ernst & Young; DT—Deloitte & Touche; PM—KPMG Peat Marwick; CL—Coopers & Lybrand; S—BDO Seidman; MH—Main Hurdman; EW—Ernst & Whinney; GT—Grant Thornton; PW—Price Waterhouse; AA—Arthur Andersen & Co.; LH—Laventhol & Horwath.

Being Reported, Settled, or Litigated

Industry of Audited Co.	$ Millions Sought	$ Millions Awarded	Fraud	Negligence
Insurance			x	
Water Heater Manuf.	1.2		x	
Savings and Loan (S&L)	1.5			x
Banking			x	
Insurance	10		x	
Portable Toilets		Purchased		
Brokerage	19.75			x
Religion			x	
Insurance		14 total	x	x
Manufacturing			x	x
Insurance				x
Brokerage Firm	160			x
Brokerage			x	
Insurance		15.7		x
S&L	250			
Banking	600		x	
Banking S&L				x
Exotic Plants		18.9	x	
Banking	560			x
S&L	300			x
S&L	250			x
S&L				
S&L				
S&L			x	
Ball Bearings				
Graphics Group				x
Gift Company		5		x
Development			x	
Brokerage		19.75	x	x
Limited Partnership		13.0		
Banking				x
Banking				
Banking		16		
Banking		15.2		
Utility		5		x
S&L	20	2.5		x
Insurance	Unspecified			
Banking				x
Network				x
Manufacturing	1.2	1.2		x
Film	£70		x	x
Insurance	165 total		x	x
Thrift	400			x
Thrift	26			x
Thrift	50			x

having a chilling effect on the profession." Lawsuits have been filed recently in such cases as Mutual Benefit Life Insurance Co., Financial News Network, Infotechnology Inc, Monarch Life Insurance Co., Central Bank, and First Executive for audits performed subsequent to the implementation of SAS No. 53.

Increasingly, lawsuits are being brought by the investing public who are questioning the value of an audit (Brenner 1991). They are alleging that either (1) the audits were incompetent, which suggests than an accountant's opinion is not worth much, or (2) as regulators and other critics charge, some of the leading firms in the country are churning out negligent audits. A recent article in Bowman's Accounting Report stated, "...Nothing has shaken CPAs as much as the embarrassing questions that are being asked about the intrinsic value of the audit. This is the first time the technical competence of the profession is being questioned by the public" (Brenner 1991, 35).[12] Certainly auditors' failure to detect management fraud and the resulting litigation, with all its coverage in the press, is fueling the fire that is causing the questioning of the value of the audit.

Concluding Comments

SAS No. 53 does not appear to have narrowed the expectation gap between auditors and the users of their opinions. The evidence suggests that SAS No. 53 has had little, if any, impact on the way audits are conducted. In addition, at least one firm's studies show that some of the guidance in SAS No. 53 may be faulty and may not identify high-risk clients. Although SAS No. 53 does require some affirmative duty to provide reasonable assurance that irregularities do not exist, CPAs appear not to have altered their audit planning or tests as a result of its issuance. Furthermore, there does not appear to have been an acceptance of SAS No. 53 by public users (investors and creditors), the SEC, or the courts. The three limiting caveats in SAS No. 53 are not acceptable to these groups, which expect *all material financial statement fraud* to be detected. As a result, SAS No. 53 falls short of their expectations. And since compliance with professional standards, such as SAS No. 53, does not provide the controlling evidence in negligence lawsuits against accountants, no material reduction in the number of lawsuits against auditors is expected. Indeed, the number of suits currently being filed supports the claim that SAS No. 53 will not result in reduced liability for auditors.

More than ever, the value of an audit is being questioned. In most cases, failure by auditors to detect irregularities will lead to litigation against

[12] Similar questioning of the value of the audit was discussed in Jacob.

CPAs. This is a very serious problem for the profession given that a recent Institute of Management Accountant's survey (The Wall Street Journal 1990) revealed that 87 percent of company managers who responded would consider committing financial statement fraud under certain circumstances. More than half were willing to overstate assets, 48 percent were willing to understate loss reserves and 38 percent would "pad" a government contract.

What is the solution? One possibility would be for the profession to accept responsibility to detect and report all fraud publicly. Certainly, to do so would substantially increase audit costs. With the very low frequency of management fraud, imposing such high costs on all clients may not be fair. In addition, auditing for fraud would dramatically change relationships between auditors and their clients and would require a changed audit approach.

The other possible solution would be for the public and others to relieve auditors of fraud detection and reporting responsibility. While this solution is most appealing to CPAs, such a reduction in expected responsibility is not likely to occur unless there is significant decrease in financial remedies, class action lawsuits, and contingent fee lawsuits. As long as it is financially rewarding to bring suit, litigation is predicted to be automatic every time a material management fraud is missed.

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Auditing Complex Accounting Estimates

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Research provides insights regarding factors to consider when formulating or auditing accounting estimates. Future dimensions of estimates create uncertainties that may be communicated by a variety of disclosure practices. Although management discussion and analysis, as well as footnotes, have been a vehicle for disclosure, regulatory pressures are redefining the notion of probable and estimable. Research is needed to determine how best to identify changing risks, assess probabilities, and communicate uncertainties. Auditing standard setters are encouraged to use industry audit guides for account-level guidance on estimates. Clarification of probable, estimable, and uncertainty communication by audit reports may be merited.

As the expectation gap standards were being drafted, a gap in the literature became apparent: the audit of estimates. Although it was recognized that soft numbers permeated the financial statements and that estimates were an integral part of every set of financial statements, the official pronouncements did not address separately the audit implications of accounting estimates. Practice had been addressing accounting estimates, but this practice development had been in the absence of a general set of standards to guide the level and type of work performed. On the basis of interviews with both drafters of Statement on Auditing Standards (SAS) No. 57, *Auditing Accounting Estimates* (AICPA, *Professional Standards,* AU sec. 342), and members of the practice community (see Appendix), the pronouncement is principally a codification of existing practice. It plugged a hole in the literature but had little perceptible influence on practice other than increased attention on a category of accounts, information flows, and accounting processes over less routine, but more than one-time transactions.

The author appreciates the assistance of the AICPA and a number of practitioners who generously gave of their time in discussing practice-related issues—particularly Donald L. Neebes, Ernst & Young.

Instead, the *interplay* of SAS No. 57 with other pronouncements in both the audit and accounting literature led to practice effects. Specifically, among the practice challenges are—

- When does Statement of Financial Accounting Standards (SFAS) No. 5, *Accounting for Contingencies*, require a financial statement adjustment, and when is disclosure sufficient?
- As "tougher to estimate" numbers appear on both the financial statements and in footnotes, what is adequate audit evidence to form an opinion on their fairness?
- When assisting the client in formulating estimates, how does the auditor ensure that the client takes responsibility for the estimate and then how should the audit process proceed?
- As the "more likely than not" threshold in SFAS No. 109, *Accounting for Income Taxes*, joins SFAS No. 5, how are the words in guidance translated in practice?
- How do inherent risk, accounting estimates, and control risk interrelate?
- What control practices, with respect to accounting estimates, merit reduction of control risk in the audit process?
- Do circumstances arise in which reduction of control risk is essential because alternative audit evidence is virtually inaccessible?
- Is more directed guidance in industry manuals sufficient, or do certain types of estimates merit increased attention?

These and related questions begin to be answered by past research and current practice, but also identify future lines of inquiry.

The principal objective of this paper is to communicate the implications of existing research for establishing and implementing auditing standards associated with the audit of complex accounting estimates. Relevant research findings are summarized, practice implementation problems identified through interviews (see Appendix) are described, and an assessment of the implications of research and implementation problems for auditing standard setters and promulgators of other types of guidance is offered. Potential research issues are likewise highlighted.

Existing Literature

The formulation of accounting estimates has been the subject of a wide array of academic research articles. Table 1 provides a representative overview of literature concerning—

- The implications of efficient markets for standard setting, information evaluation, and disclosure practices.

- The ability to quantify by statistical procedures both their future orientation and how they might be affected by incentives, as well as judgment biases and related considerations.
- The accounting selection process, its determinants, and the variety of estimates required.
- Interim reporting issues.
- The sophistication of users.
- Available valuation tools.
- Communication, interpretation, and automation.
- Independence and remaining challenges.

(continued on page 141)

TABLE 1 Existing Literature

Implications of Efficient Markets

"What should be the FASB's objectives given an efficient stock market? Beaver has stated four implications.... First, many reporting issues are trivial. Firms should report using one method and provide sufficient disclosure to permit adjustment to other methods. Second, the role of financial reports is to prevent individuals from earning abnormal returns from inside information. All items should be disclosed if there are no additional costs. Third, naive investors can get hurt by presuming they can trade on published accounting data and earn abnormal returns. The Financial Accounting Standards Board (FASB) should discourage these beliefs. Fourth, the FASB should realize that accounting reports are not the only suppliers of information. Other sources of information may be more appropriate for disseminating firm information if they involve less cost.

The implications for FASB objectives detailed by Beaver are open to serious question for three reasons. First, stock market agents are not the only users of accounting information. Other consumers have financial information needs that should concern the FASB. Second,...the efficient markets hypothesis is overstated...[and more likely to be] partially efficient...Third, even if stock markets are completely efficient in an informational sense, various reasons suggest that stock markets are not efficient in an allocative sense" (Ketz and Wyatt 1983/84).

"Market prices represent one approach to the collapsing of multidimensional future benefits and sacrifices into a single number. They can reflect a rich set of information about the future events and reflect the 'market's' (i.e., buyers and sellers) assessment of future benefits and sacrifices. Under conditions of imperfect and incomplete markets, market prices may only imperfectly reflect future benefits and sacrifices" (Beaver 1991). Boatsman, Dowell, and Kimbrell (1984/85) report on whether cost is better estimated with parent share price before a business combination is announced to the capital market or afterward.

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They propose a simple rule: "To use the preannouncement price if the share price declines upon announcement of the terms of combination and the post-announcement price otherwise. . .this rule minimizes error in all cases except when the capital market is considerably more, in fact one third more, optimistic than the negotiating parties. Such cases are expected to be rare."

Miller (1980/81) concludes, "There is an important asymmetry in the impact of information on stock prices. Accounting that leads to overvaluation is likely to result in overpricing, while accounting that understates earnings probably will not have an effect. Thus the maintenance of fair stock prices will be facilitated by accounting conventions that resolve ambiguous situations by using a more conservative rule."

Lev and Taylor (1978/79) use capital market efficiency to "imply that the information conveyed by conventional performance measures is more consistent with the information used by investors (and hence reflected in stock prices) than the information conveyed by the earnings net of cost of equity measure." This suggests that firms' earnings should not be charged with a cost of equity capital, assuming certain caveats such as reasonable information costs.

Kellogg (1984) reports that "there is some support for a prediction that changes in realizable values will, on average, be associated with less concentration of stock price declines in the discovery month.". . .Theory suggests "that the degree of precision of information,. . .defined as the inverse of the variance, is positively related to the concentration in time of capital market reaction" and that "the precision of information relative to previously available information is positively related to security price variability when the information is announced."

***Implications:** Stock market prices can be used in formulating and evaluating the reasonableness of accounting numbers but is only one source of information and has limitations.*

Disclosure Approach

Footnotes or Financial Statement?

"[I]t may be a matter of indifference as to how lease information is presented" to stockholders, yet a survey in 1972 indicated "the off-balance sheet nature of lease accounting was an advantage in dealing with 'unsophisticated' statement users. In this context, unsophisticated statement users included the 'small stockholder and the regional bank'" Martin, Anderson, and Keown (1978/79).

Murray (1981/82) concludes, "Direct capitalization seems to add little informational content vis-a-vis footnote disclosure." Consistently, Munter and Ratcliffe (1982/83) conclude, "investment managers do distinguish among the alternative treatments of leases." In addition, Marston and Harris (1988) find that "leases and debt are substitutes," although "firms do not view leases as displacing nonleasing debt on a dollar-for-dollar basis." Research estimates the displacement at from 60 to 85 cents on the dollar.

Bazley, Brown, and Izan (1985) studied the rationale for voluntary disclosure by Australian companies of lease obligations from 1964 through 1980 and

discovered an association with industry, firm size, and whether the lessee was a subsidiary company of a foreign parent. Weak associations were observed with whether the lessee entered into the Australian Institute of Management's good reporting award.

Tosh and Rue (1988) report that "the [unconsolidated finance] subsidiary's debt is reflected in the firm's market risk."

Nichols (1973) found no significant difference in relative forecasting ability as it relates to future income figures, from inclusion or exclusion of extraordinary items.

Implications: *The market is reasonably efficient in reflecting certain types of footnote disclosures in the stock price, but financial statement inclusion of such information would be perceived as more useful for unsophisticated users.*

Ability to Quantify

Behavioral Considerations

Einhorn and Hogarth (1986) and numerous citations provided in Abdel-khalik and Solomon (1988) describe decision making in the presence of ambiguity, the use of heuristics, framing effects, elicitation of Bayesian priors, and similar behavioral considerations in formulating judgments. A major implication of such literature is that decision making can be improved by understanding common problems and studying the effect of the various decision aids.

Preferred Quantification

"A preferred quantification consists of (1) an actual increase or decrease in cash; (2) in the absence of an actual increase or decrease in cash, a highly probable and legally required future increase or decrease in cash; and (3) a measurable decrease in an existing accounting quantification. . . . If an event does not produce any preferred quantification, quantify both effects of the event by the cash increase or decrease that would have occurred in the most likely analogous transaction" (Sorter and Ingberman 1987).

Kinney (1983) describes "the development of statistical procedures that reflect the nature of the population and result in effective and efficient estimators." Quantitative applications in auditing are described. Kinney (1981/82) likewise describes the use of prior-year information in formulating predictions of future years' adjustments. Also see Wallace (1991a,c) for a discussion of technology and the use of both analytics (Scott and Wallace 1992) and statistical methods.

Incentives

Accounting treatment and the choice of both accounting method and disclosure approach is systematically related to various attributes of a firm. In particular, Daley and Vigeland (1983) report that firms capitalizing research and development costs until 1974, when choice existed pre-SFAS No. 2, were "more highly levered, used more public debt, were closer to dividend restrictions, and were smaller than firms which expensed R&D costs." The variables cited were attempting to capture "the firms' proximity to constraints imposed by debt covenants, the cost of violating these covenants, and political costs... The

(continued)

results are consistent with the hypothesis that the higher renegotiation costs associated with public debt provide an additional incentive for firms to choose accounting techniques to avoid constraints imposed by debt covenants."

"During an election campaign, incumbent managers apparently exercise their accounting discretion to paint a favorable picture of their own performance to voting stockholders. If elected, dissidents tend to take an immediate earnings 'bath' which they typically blame on the poor decisions of prior management" (DeAngelo 1988).

"Provisions in the securities acts provide incentives to purchasers of common stocks to initiate class action lawsuits when stock prices decline at and preceding announcements that directly reduce, or imply a reduction in, previously reported accounting book values" (Kellogg 1984).

This research identifies "Type 4" information releases as "realizable values of assets reported in prior financial statements that are being reduced" and explains the assets revalued were "receivables, inventories, capitalized product development costs, investments in subsidiaries, and marketable securities."

This "Type 4" information release is cited as distinguishable from other possibilities since "there is no implication that prior financial statements were *at the time of their publication* imperfect or incomplete. Realizable values regularly change between financial statement preparation dates. . . .The Federal courts. . .emphasize the subjective nature of estimated valuations and their susceptibility to changing conditions." "There is some evidence that announcements of these revisions are associated with different patterns of security returns than are other kinds of announcements that contribute to lawsuit occurrence. On average, information that asset realizable values are being revised is associated with greater abnormal returns prior to announcement and smaller abnormal returns in announcement months than are announcements that fraud, mistake, or failure to separately note specific transactions affected prior financial statements."

Hughes (1986) observes that disclosure is a signal selected by companies going public and that the regulatory setting plays a role in contract enforcement. Specifically, the "investment banker is legally liable (along with directors of the company and its auditors) for damages if the security price declines within three years and material omissions or misstatements are in the prospectus."

Leases

Accounting for leases and the accounting selection process pre-SFAS 13 encompassed leverage effects, management compensation, and taxes (El-Gazzar, Lilien, and Pastena 1986).

Executory Contracts

Given the piecemeal treatment of executory contracts, Cramer and Neyhart (1978/79) suggest "extending *recognition criteria* (i.e., criteria for admitting data to the accounts and for determining the specific information to be included in respective financial statements) to encompass the recording of executory contracts in situations where reasonable assurance exists that the reciprocal promises will be fulfilled." Such an approach would set aside

perceived overreliance on cash basis, corporeal transfers, and the requirement of partial performance and begin to erode another source of "off-balance sheet financing." Related commentary is provided by Henderson and Peirson (1984).

An analogy can be drawn between pledges at educational institutions and certain types of executory contracts. ". . .the economic value of an asset (e.g., a pledge or bequest) should be accounted for in the same manner regardless of the type of nonprofit organization" (Kagle and Dukes 1988). Valuation challenges and the role of legal enforceability are among the issues raised regarding current practice.

Perquisites

The "SEC issued an interpretive release [the August 1977 release] stating that perks must be included when remuneration is disclosed in SEC filings" (Weisen and Eng 1978/79). "Three approaches were available. . .

(1) Including the perk amount in the remuneration table, but with no other disclosure, e.g., a footnote description;
(2) Including the perks amount in the remuneration table, and providing a footnote description; or
(3) *Excluding* the perk amount in the remuneration table, but providing a footnote description.

Most companies did not quantify perks. . ." (Wiesen and Eng 1978/79).

"In footnoting, companies avoided specificity by stating that the 'perks' were:

- Directly related to job performance.
- Ordinary and necessary to the conduct of business.
- Not material.
- Impossible to value or not reasonably ascertainable.
- Not allocable between business and personal use, and indicating an approximate or maximum value."

"The independent auditor's responsibility for the content of remuneration tables and accompanying footnotes depends, in part, on the document involved." "Shareholders bring perks lawsuits, and demand disclosure on perks by suggesting shareholder votes on the issue."

Pensions

In describing pension liabilities, Hennessy (1977/78) observes, "This off-balance sheet liability probably now exceeds $50 billion for all American corporations. . . .Whatever the complexities and uncertainties of ERISA, actuarial cost methods, and pension plans, one thing has become clear. Corporate employers have a legally enforceable obligation with respect to their pension plans. An accounting system that fails to recognize such a generally acknowledged fact can only expect its credibility to be further eroded in the eyes of investors and creditors."

Audit program steps for pension costs and disclosures under SFAS No. 87 and No. 88 are detailed by Schwartz and Gillmore (1988), including how to review clients' key economic assumptions. Among the assumptions cited are discount rate, rate of future compensation increase, and expected long-term rate of return on plan assets.

(continued)

TABLE 1 **Existing Literature *(continued)***

Postemployment Benefits

"[F]ull accrual accounting for the cost of retiree health care benefits could cut the annual net income of many corporations by. . .30% to 60%" (Gerboth 1988). ". . .accountants have never felt constrained to recognize only those obligations that are legally binding." Assumptions include "rates of inflation, mortality, retirement, disability, turnover, and dependent coverage" and "rate of increase in the general level of health care costs," "future changes in plan terms," and "future changes in legal and regulatory requirements."

Perspective as to the judgment elements in such assessments is provided by a two-part article responding to the query "Is Social Security Financially Feasible?" (Robertson 1987, Part I and Myers and Creedon 1987, Part II.) The role of assumptions is particularly apparent.

Embedded Estimates

Often estimates are embedded in other estimates, such as the role of tax rates; related issues on means of quantifying such rates are described by Stickney and McGee (1982), Stark (1985), and Bernard (1984). Nurnberg, Thomas, and Cianciolo (1985) describe an approach to estimating an income tax measurement valuation allowance account and related problems. The interplay of tax consequences and LIFO layers is explored by Cottell (1986). Another example is the accounting for shrinkage within continuous flow process costing systems as a prerequisite to valuing inventory costs (see Mensah and Chhatwal 1987). Ten causes of problems with inventory valuation are similarly outlined by Shayeb (1986), with related solutions—problems include changing standard costs, incorrect computation of purchase price variance, failure to expense materials used by nonmanufacturing departments, poor controls in issuing and receiving material, inaccurate bills of material, failing to expense monthly material usage variance, incomplete scrap policies and procedures, inaccurate recording of "outside inventory" (i.e., owned by one company but physically held by another), improper accounting for demos, marketing samples, and engineering prototypes, and a formula approach to relieving cost of sales. Schnee and Hreha (1987) explain how boot determination and capital gains interrelate in the accounting for reorganizations. Price Waterhouse (1991, 1992) points out that "FAS 109 provides little guidance for management or auditors on the issue of assessing the reliability of management's estimate of future taxable income."

Interim Reporting

Deitrick and Alderman (1978/79) report that "U.S. Steel is generally credited for being the first American corporation to report interim financial information; this initial statement was issued in 1902. By 1920, approximately 50 percent of all companies listed on the New York Stock Exchange (NYSE) reported interim information. And by 1960, 93.5 percent of the listed companies were issuing quarterly or more frequent reports and another 5.5 percent were issuing semiannual reports. For most companies, publication of interim financial information was a combination of voluntary disclosure and compliance with new listing requirements. The American Stock Exchange (AMEX) did not

require its listed companies to publish interim financial information until 1962. . . .The reporting of interim results to the exchanges and to leading financial publications is assumed to be sufficient. The SEC did not require companies under its jurisdiction to file interim information until 1945." The 1945 requirements were revenue oriented, in 1955, the form 9-K required nine income related disclosures, and in 1972 form 10-Q was adopted (filed forty-five days after each of the first three fiscal quarters). These researchers describe pressures for an "auditor of record" concept and related cost/benefit considerations.

A comparison of statistics for companies undergoing interim-limited reviews by CPAs and those not reviewed indicate "no large-scale, systematic differences between the data which had been reviewed and that which had not, leading us to conclude that audit involvement did not have a significant effect on the interim data" (Alford and Edmonds 1980/81).

Implications: *Tools are available for estimation, factors influencing accounting choice are identified in the literature, and pressures exist to expand and enhance accounting estimates.*

Available Approaches

Crandall (1987) outlines twelve valuation methods used to place a price tag on businesses. "In a perfect transaction, all parties would share all the major relevant facts, and the business would be sold for cash—but so much for fairy tales." This quote bears out the perceived likelihood that approximation techniques will have to be used to assess the reasonableness and acceptability of proposed prices.

Weiss (1987) describes the valuation of closely held stocks, in light of a legal decision and in so doing describes an available approach to such valuations—discounted cash flow method vs. the market comparable approach.

"Mathematics, we are told, is 'the subject in which we never know what we are talking about, nor whether what we are saying is true.' . . .'mathematics studies nothing but hypotheses, and is the only science which never inquires what the actual facts are.' 'Mathematics is thought moving in the sphere of complete abstraction from any particular instance of what it is talking about. . . .The certainty of mathematics depends on its complete abstract generality.' For the refinement of thought, particularly deductive thought, the value of mathematics is unquestionable. . .the model of reality on which the postulates are based may be so imperfect that the inferences, however carefully drawn, will be misleading. . . .the finest acquaintance with computational technique is no substitute for discernment and discrimination in the field of experience which we study" (Chambers 1967).

Inventories

A large body of empirical research on LIFO begins to explain the effect of LIFO adoptions on security prices, the differences that led to different accounting choices, and the market's ability to adjust for differences in inventory methods, as reported by Lindahl, Emby, and Ashton (1988). Such research provides insight as to empirical regularities that need consideration in exploring valuation differences.

(continued)

TABLE 1 Existing Literature *(continued)*

Implications: *Accounting estimates involve qualitative and quantitative dimensions.*

Sophisticated Users

"[T]hese results support the identification of loan officers as a 'sophisticated' user group. . . Financial statements play an important role in their responses to information and they have a high degree of consensus and self insight into their own cognitive processes" (Zimmer 1981).

Implications: *The* prudent sophisticated investor *is a reasonably defined concept in guiding standard setting.*

Communication

"A major feature of current financial reporting is that it is accounting for assets and liabilities with uncertain future benefits and sacrifices in terms of a format that is very deterministic in appearance. . . At a minimum, it places a burden on the reporting of risk and uncertainties, because a single number creates the appearance of certainty when it does not exist. . . Uncertain, future benefits and sacrifices are inherently multidimensional in nature" (Beaver, 1991).

"[I]t is better to be approximately right than to be precisely wrong. This suggests the desirability of disclosing the estimated precision and reliability of accounting measurements, instead of encouraging the reader to assume that the figures in financial statements contain no 'margin of error'.

"It has become the practice in Britain recently for leading practitioners to complain that laymen fail to realize that accounting measurements are not exact. Such remarks are intended as a defense against criticisms of the shortcomings of financial accounts. The fault surely lies not in the eyes of the lay beholders but in the published financial accounts, which fail to disclose the existence of inexactitudes of measurement" (Stamp 1970).

"The more one reflects on the nature of the deficiencies in modern financial accounting, which have given rise to controversies in Australia, North America, and the U.K., the more it seems apparent that financial accountancy has lost touch with the needs of the modern world. It has, in a phrase, failed to adapt and evolve. Far too many practitioners have adopted the attitude that can be summarized rather crudely as, 'There is nothing wrong with accounting that a good public relations campaign won't cure.' These practitioners seem to believe that, if laymen could only be taught to understand the limitations of conventional accounts, they would soon stop complaining about the inadequacies which have become so painfully apparent in recent years. These professional apologists seem to regard the 'limitations of financial accounts' as immutable facts of life with which the world has to learn to live.

"In truth such 'limitations' are the mark of the failure of the profession to adapt its 'principles' to the needs of a modern world. Unless the profession soon learns to adapt itself it will become, like its currently extant 'principles,' irrelevant and dispensable" (Stamp 1970).

Implications: *Communications need to be enhanced, as do the underlying valuations being communicated.*

Problems With Proxies in the Absence of Valuation

"[F]inancial statements are seriously flawed. To reach meaningful conclusions, users of financial statements must adjust or supplement them with additional information. In many cases, the problems with the statements are so intractable that one must apply techniques that are little better than rules of thumb in order to reach a conclusion. . . .Over the last several years, as annual reports have become more complex, the number of people who can truly understand them has declined substantially" (O'Donnell 1986).

Houlihan and Sondhi (1984) report: "Investors consider off-balance sheet lease obligations of lessees when making investment decisions. The methods commonly used by investors to determine the debt-equivalent amount of those obligations frequently overestimate those obligations, making lessees appear more leveraged than they really are. This can increase the lessees' borrowing costs, decrease their debt capacity, and possibly even affect their ability to access the public debt markets. . . . If investors are miscalculating lessees' total capital and leverage ratios, it follows that they may also be miscalculating their returns on capital, interest coverage ratios, and other quantitative performance indicators."

Implications: *Approximations inherently involve complexity and measurement error.*

The Significant Role of Interpretation

"[T]o develop the user of those tools into a person who can look at data and see a picture (the interpretation) rather than numbers. Establishing the facility for translation (accounting training) is not only more easily achieved than developing interpretive skills (economic reasoning), it seems almost to inhibit the success of the latter.

"To begin with, financial statements are rendered entirely in monetary terms. Yet everything beyond the cash account is further and further removed from cash (and sometimes even from reality). This is true not only of the balance sheet, which at least attempts to represent a real bricks-mortar-machinery-and-inventory situation, but also of the income statement, which is conceptual. While assets beyond the cash account are not cash, on the other side, the liabilities generally are cash obligations. The mismatch is first evidence of a potential credit problem.

"[S]everal sources of earnings management were suggested: The selection between alternative accounting methods is classified as source type 1 while source type 2 is the accounting judgment required in the implementation of accounting principles. . . .while type 1 is a visible act due to disclosure rules, type 2 is a behind-the-scenes act, . . . SFAS No. 13 results in a conversion of type 1 into type 2. . . .We question the wisdom of trading a visible source of earnings management for an invisible one" (Gardella 1986).

(continued)

"[T]wo companies could obtain materially different results with identical leases. This can occur because these companies might have widely different interpretations of what constitutes a bargain purchase option, bargain renewal option, material lease, or other factors. Also, estimates of fair value, residual value, economic life, implicit interest rate, incremental borrowing rate, executory costs, etc., differ between companies. Thus, SFAS No. 13, while successfully narrowing the range of acceptable accounting methods, opened the door to another type of manipulation.

"A majority of the Board members expressed the tentative view that if SFAS No. 13 were to be reconsidered, they would support a property-right approach in which *all leases* are included as 'right to use property' and as 'lease obligation' in the lessee's balance sheet. If politically feasible, it would be a step in the right direction" (Palmon and Kwatinetz 1979/80).

"Hedge accounting on a futures transaction is appropriate if the commodity underlying the futures contract is linked, in substance, to the price risk associated with the commodity being hedged.... Determining whether price exposure exists (to be eligible for hedge accounting) must include considering all relevant facts and circumstances. Certain anticipatory transactions create such an exposure" (Rachleff 1984).

"[B]oth swaps and futures contracts can change from matched positions over a period of time...interest rate swaps can have a significant impact on a corporation's financial projections...No accounting recognition is made at the inception of the swap agreement. Accounting for the expanded use of option transactions is explored by Hauworth and Moravy (1987) who explain, 'The basic economic purpose of options is to serve as a tool for transferring price, foreign exchange, or interest rate risk from those wishing to avoid risk ("hedgers") to those willing to assume it in anticipation of making a profit ("speculators").' A 'mark to market' approach is recommended 'unless the option transaction meets the criteria for hedge accounting in which case gains and losses should be deferred and reported symmetrically with the hedged item' " (Riley and Smith 1987).

Figlewski (1987) provides an overview of the interaction between derivative securities on financial instruments and the underlying cash markets, with particular emphasis on their role in the marketplace to facilitate risk management. Contingent claims however can produce "somewhat slippery connections among the markets for fundamental assets and the various derivative securities."

***Implications:** Interpretation skills must be developed with respect to reported numbers, as well as the underlying transactions producing such numbers.*

Automating Auditing

"[E]xpert systems...bring knowledge of recognized experts to those who do not possess the same level of knowledge or experience.

"The decision support system does not make any decisions; it supports and enhances the decisions that auditors make. It is as if each staff person had a partner looking over his shoulder, saying, 'This is what I would do. What do you

think?' The program does not give answers; it brings up questions that help the auditor select procedures and decide how much of each procedure is necessary.

"Overall, such systems function as checklists containing important points, covering all the bases, and raising questions an auditor might forget to ask because there are so many other questions—and they are interrelated and complex. For each account, the program guides the auditor through such questions as. . .'What is the amount of risk in each significant account?'

"[A] computer cannot think; it can only remember. No machine can approach the range of the human mind. However, computers are wonderful tools with their phenomenal memories, speed, and accuracy. . . .

"At IBM's training sessions, the coffee-break tapes carry the message, 'Machines should work; people should groove.' Computers give us tools that can handle dull, mechanical tasks and free us to focus on more important, more interesting issues" (Temkin 1986).

Estimates and risk modeling are increasingly facilitated by electronic spreadsheet software (e.g., Togo 1987).

Implications: *Technology should enhance the effectiveness and efficiency of accounting estimations.*

Independence in Auditing

"There can be little doubt that the desired product is financial disclosure which can be tried, tested, and proven to be 'true,' 'fair,' 'reliable,' 'credible,' and 'authentic.' For such to be the case, financial disclosure must consist of 'independent information;' that is, information which can be inter-subjectively tested. . . .the auditing of accounts can be likened to a process of 'quality control,' a process in which a product is tested in terms of the extent to which it conforms with prescribed specifications based on the use for which the product has been designed. Such a testing process must be carried out independently of both the production process itself and those who operate it" (Wolnizer 1978).

Implications: *To effectively audit accounting estimates, an independent assessment apart from the original formulation process is essential.*

Challenges Remaining

"Accountants enter an age of anxiety" is reported as a financial press observation in Australia by Birkett and Walker (December 1971). Attention is brought to challenges facing the profession, past scandals, responsive and unresponsive behavior, and the need for the profession not to be static but to be responsive to changing and challenging conditions.

"Professor R.J. Chambers argues that the most significant aspect of the financial position of a business firm is that it indicates the firm's capacity for adaptation to the changes in environment which an uncertain future may bring. Accordingly, the statement of financial position should ideally show all assets at their *current cash equivalent*, defined as 'the market selling price or realizable price of any or all goods held'" (Wright 1967).

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Stock Compensation

Beresford and Locatelli (1983) place the problem of accounting for stock compensation in perspective: "Theory aside, the crux of the Opinion No. 25 debate seemed to boil down to practical considerations. While many of the adopters of Opinion No. 25 may have agreed that all compensatory plans should result in compensation costs and that such costs should be measured at the time the stock compensation is granted, the majority did not believe it was practical to measure compensation according to those guidelines in all cases.

"However, a minority believed that while measurement of compensation costs according to the theoretically pure concepts might be difficult in some cases, it was not impossible." The issue of how employee stock option plans might be valued is likewise examined by Noreen (1979/80).

Bad Debt Expense

"'Bad debt expense'. . . is not really a recognition, but rather a quantification problem. Bad debt expense is not an expense in the sense that expenses are the extinguishments of rights to utilize a resource. Rather, the bad debt expense represents a quantification of the sales inflow in terms of the amount of inflow that is probable and measurable" (Sorter and Ingberman 1987).

"[U]npaid bills [tied to bankruptcies] now total well over $33 billion annually . . . Receivables can typically represent as much as 91 percent of a company's working capital, or 42 percent of its net worth. The protection offered by business credit insurance goes far beyond that of bad debt reserves.

"Quite simply, the coverage insures that a company can be paid for what it sells. Any covered excess bad debt losses are protected by the insurance policy" (Legge 1987). This may merely substitute the risk of the insurer for the receivables' associated risks.

"Two major inconsistencies of the recognition and quantification rules were observed. The first is that the recognition rules, while dealing with legal rights and obligations, result in the omission of an extremely important segment of rights and obligations. Contractual rights and obligations are not recorded as assets and liabilities, and the assumption of those rights and obligations is not an accounting event [unless, for example, a deposit has been received]. At a time when contractual rights and obligations are assuming an ever-increasing importance, it is hard to rationalize this omission from the accounting universe. . . .

"The second major inconsistency is accounting's ambivalent attitude toward present value. When an activity is to be quantified in terms of future cash flows, sometimes the required quantification is in present-value terms and sometimes it's in absolute terms. There does not appear to be any logical reasoning for how this incongruity arose and why it is allowed to persist" (Sorter and Ingberman 1987).

"What types of past transactions and events are considered acceptable as a basis for conditioning beliefs about the future?. . .consider the estimation of uncollectible accounts. How rich is the mix of information upon which the

estimated uncollectibles account can be based?. . . a known 'predictable' pattern (i.e., time series dependency). . . . Can the estimated uncollectibles reflect the fact that delinquencies next quarter are expected to deteriorate further or are future delinquencies 'critical events' that cannot be anticipated, regardless of the expected dependency in the aging schedules?. . .What information are the analysts reflecting in their expectations that is not reflected in the current loan loss allowance?. . .Currently we do not have a well-articulated statement as to what types of estimates of future events are within the current system of financial reporting versus what types are beyond. Alternatively stated, there is not a well-articulated statement of what types of information (i.e., past transactions and events) are acceptable upon which to condition the estimated effect of future events on existing assets and liabilities" (Beaver 1991).

Green Accounting

"Standardized 'Green Audits' will become a key element of corporate environmental policy and practice" (Socha and Harvey 1991).

"The International Chamber of Commerce has defined environmental audit as 'a management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of helping to safeguard the environment by:

- Facilitating management control of environmental protection.
- Assessing compliance with company policies which would include meeting regulatory requirements'" (Vinten 1991).

Environmental liabilities were the subject of a 1991 *Audit Risk Alert* (AICPA 1991) that outlined associated "red flags" such as purchase of land below local market prices, acquisition of increased insurance coverage against environmental risks, and participation in a real estate transaction or corporate merger.

"According to SEC Regulation S-K (reg. 229.103), disclosures dealing with the discharge of materials into the environment should be described in the legal proceedings section of Form 10-K if:

'A governmental authority is a party to each proceeding and such proceeding involves potential monetary sanctions, unless the registrant reasonably believes that such proceeding will result in no monetary sanctions, or in monetary sanctions, exclusive of interest and costs of less than $100,000, provided, however, that such proceedings which are similar in nature may be grouped and described generically'" (Freedman and Stagliano 1992).

Yet, "many firms make little or no disclosure". Estimates of exposure for potential Superfund sites are as high as $750 billion. Pollution control costs for environmental programs meeting current legislative requirements will reach nearly $160 billion a year by [the year] 2000 (FASAC 1992).

Past, Present, and Future

Sterling has the attitude that "all measurements are of past dimensions. . . . The original purpose of making the measurement may be to predict a future condition or retrodict ['predict' backward] a past condition, but this does not negate the fact that measurement concerns an existing condition and that

(continued)

predictions are of a fundamentally different nature" (Mattessich 1971). Yet, as Mattessich observes, "Nowhere in mathematical measure theory will the reader find definitions of 'measure' and 'measurement' restricting these concepts to past or present events."

Reporting Effects and Economics

"[T]he reporting requirements of FASB Statement No. 4 results in accounting 'gains' being reported for most discounted convertible bond exchange (DCBE) transactions, while the economic analysis indicates 'losses' in most cases" (Loy and Toole 1979/80).

In-Substance Defeasance

"When implementing an in-substance defeasance, an enterprise may have to address the following issues: some modest reinvestment return could be assumed when determining the amount of assets to be placed in trust...; legal counsel should be sought to determine the legal status of the assets in the trust for any contemplated in-substance defeasance transaction...; (instant defeasance on new debt is not intended despite opportunities posed through European markets); Possible future payments on debt that remains legally outstanding but is extinguished in a defeasance transaction give rise to loss contingencies" (McDonald and Sutton 1984).

Mortgage-Backed Securities

"[N]o real consensus has been reached as to how...investors...account for their investment in the Trust or Partnership." The mortgage-backed securities marketplace will probably continue to expand in both volume and complexity as new products, structures, and techniques are introduced....In recent years, the mortgage-backed securities marketplace has become extremely complex in terms of the types and structures of securities being created, the accounting, regulatory and tax implications to investors and issuers, and the related valuation and yield sensitivity of these instruments" (Wertz and Donadio 1987).

Lower of Cost or Market

Consider the extensive evidence and debate on valuation: nonaccountants have been observed to think in terms of cash flow when reading income statements and net realizable value when reading balance sheets (Lee 1984). The history of the lower of cost or market vantage points is outlined by Parker (1965), with the observation that the rule is "practical" though suffering from "'theoretically' illogicality," thereby surviving through embodying both cost and value, from a conservative direction.

Purchase Audit or Review

"The 'soft' numbers in financial statements (e.g., allowances for doubtful receivables, excess and obsolete inventory, and unprofitable contracts), which are determined by management judgments and as to which there may be reasonable difference of opinion, become hard money transferable between the pockets of buyer and seller according to these judgments. Under these circumstances, the materiality threshold of net worth or net income in such financial statements may be almost anything more—or less—than zero" (Gormley 1979/80).

Cost Implications

Research indicates "that smaller businesses pay proportionately higher accounting costs" but begs the question of cost/benefit trade-offs and causal factors influencing such cost proportions (Nair and Rittenberg 1982/83).

***Implications:** A number of challenges involving theoretical, empirical, political, and reporting dimensions exist in formulating improved accounting estimates.*

One key line of inquiry in such literature is conceptual, including valuation models, identification of common factors that determine value or economic consequences, and quantification of complexity. Determinants of the complexity of accounting estimates include the extent to which we understand the causal factors of a particular economic event.

Consider the following observation by William H. Beaver concerning SAS No. 57 and the intrinsic future dimension of accrual accounting:

> Statement on Auditing Standards No. 57, "Auditing Accounting Estimates," illustrates the pervasiveness of future events and provides forty examples of where accounting estimates are required in part because "the measurement of some amounts or the valuation of some item is uncertain, pending the outcome of future events." In at least one-half of the examples, the estimation problem arises because of uncertainty regarding the outcome of one or more future events. Future events must be addressed because of the nature of accrual accounting. . . . Accruals can be viewed as a form of forecast about the future based on current and past events, and accrual accounting can be viewed as a cost-effective way of conveying expectations about future benefits or sacrifices (Beaver 1991).

Conceptually, we model key factors—often emphasizing parsimoniously, elegant depictions of interrelationships—and then empirically we set out to test those models. The latter phase of research struggles with empirical definitions of concepts, identifying proxies that are often plagued with measurement error, and then clarifies what insights are added by the models and what appears to remain "unexplained." In pursuing a theoretical framework, it is useful to keep in mind that:

> . . .depending upon the particular assumption adopted, a set of theories purporting to explain the same physical phenomena may exist. . . .Conant has observed that "a theory is only overthrown by a better theory, never merely by contradictory facts;" we are inclined to add that the use to which a theory is put may also generate evidence for the choice of one theory or another (Williams and Griffin 1969).

Practice applications of conceptual and empirical results lead to explicit recognition of certain factors that influence or determine estimates. This can lead to such thought-provoking comments as: "Whether the combined explanatory power of the variables—about 58% of the variance of annual returns—is good or bad news about market efficiency is left for the reader to judge" (Fama 1990). At what point are models sufficiently comprehensive to predict and explain economic behavior? One interesting development is the increasing recognition of the role of incentives in the form of the potential effects of compensation arrangements, as well as the role of monitoring. If, for example, an auditor recognizes that a bonus plan keyed to operating income is in place, with a floor and ceiling specification, then that auditor can better understand possible incentives affecting management's relative aggressiveness or conservatism when formulating certain estimates. By the same token, monitoring of practices influencing operating income would need to be given greater attention than would practices without the attendant compensation effects.

Decision Making

Research has clarified the superiority of decisions among three experts relative to an individual decision maker. It has also noted repeatedly that mere consensus in no way implies greater accuracy. Hence, means of ensuring against forced consensus, planned agendas, and various political dynamics are pursued, such as Delphi-type approaches to resolving key corporate decisions among managers with diverse perspectives.

The Bayesian context or "belief function" technology base of expert systems has increasingly sought variations of probability estimates as a basis for developing decision rules and guidance. Use of graphics, sophisticated software, and feedback mechanisms within expert systems have all increased decision makers' understanding of probabilities, the independence of such probabilities, or lack thereof, and their consequences for ultimate decisions. Substantial research exists on elicitation of subjective assessments of probabilities and when certain approaches appear to be more effective (Abdel-khalik and Solomon 1988).

Risk Assessment

Risk assessment has been disaggregated to include the notions of inherent risk, control risk, and detection risk. Practitioners do not hesitate to characterize "soft" numbers as having greater inherent risk. As discussions explore control risk dimensions, the foremost concern is who is making the estimate and with what information base. The more competent the individuals involved and the more tractable and comprehensible the information base used in developing estimates, the better the control

environment and related procedures for estimation. Figure 1 summarizes these key considerations. Nonetheless, most practitioners expressed a resistance to reducing control risk to its lowest level without directing attention to both the process and the result. Many suggested that they would view it essential to test independently the estimate itself, regardless of how it was achieved. Yet, anecdotes were shared that challenged the availability of an independent means to test certain types of estimates that are peculiar to an entity's operations. As an example, determining product liability for railroad car manufacturers requires records on defects in cars and potential liability claims tied to reported defects. Whether an adequate means exists of gathering such information from sources *other* than the client appears debatable at best.

Range of Reasonableness

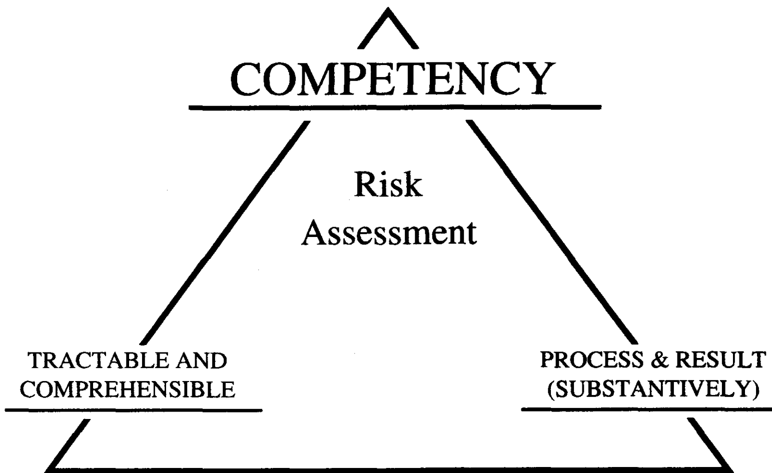
If the focus of the practitioner becomes the estimate itself, one question is how to determine the breadth of reasonableness. Moreover, once a range is considered and the client estimate is found to lie within the range, should the point estimate alone be documented as reasonable, or is an interval assessment preferable? The guidance in the literature states that if all probabilities are equally likely, the lowest bound is to be selected. Consider first the likelihood of a "uniform distribution" of equally likely outcomes and then pose the question of why the literature has endorsed a lower bound rather than the more common selection in statistics of mean or median? The answer appears derivable from revisiting history.

When SFAS No. 5 was developed, the concern was over "hidden reserves," whereby reserves for contingencies and the like were being "stored away for a rainy day," so to speak. The incentive of the regulators was to limit the extent of accruals. Ironically, in today's environment, the concerns are largely the reverse: Companies appear to be avoiding accruals for contingencies, even when probable, on the premise that estimation is too difficult. Pressures are increasing by the Securities and Exchange Commission (SEC), particularly in the area of environmental cleanup responsibilities by companies, to estimate contingencies even when difficult to measure. An appropriate perspective on the importance of estimation follows:

> The first step is to measure whatever can be easily measured. This is okay as far as it goes. The second step is to disregard that which can't be measured or give it an arbitrary quantitative value. This is artificial and misleading. The third step is to presume that what can't be measured easily isn't very important. This is blindness. The fourth step is to say what can't be easily measured really doesn't exist. This is suicide (Daniel Yankelovich, as cited in Smith 1972).

FIGURE 1 Evaluating Control Risk Associated With Estimates

Who is making
the estimate?



What
information
base is
being used?

How well
controlled is
the environment
and what are
the controls
over the
estimation process?

The avoidance of such "suicide" may lead to more frequent estimates, but the dilemma of having gone for a limit of the bound, rather than its mean value within SFAS No. 5 continues.

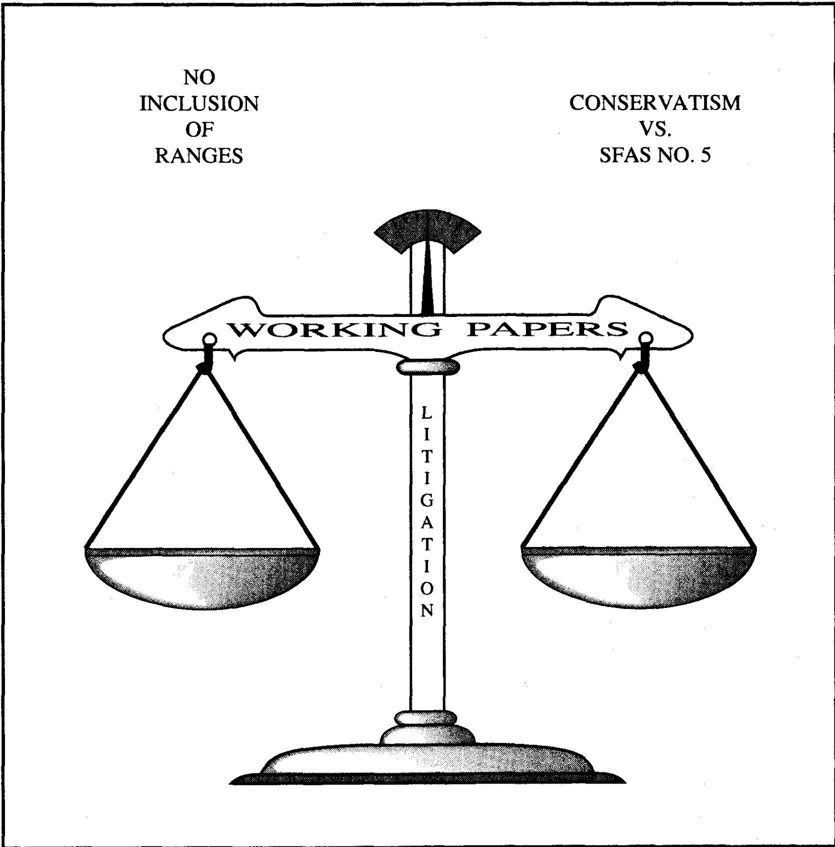
Practitioners have asked the question: Which approaches in paragraph .10 of SAS No. 57 are most commonly used by the auditor and what is the rationale for the approach used? Responses suggest that approaches are highly dependent on (1) the client setting, (2) the technology and information at hand, and (3) the divergence of client estimates and the auditor's assessments. One practitioner told of a legal suit that had implied the stated range of "reasonableness" in the working papers should have been booked in its most conservative form. The consequence of this litigious setting is that at least one major international firm is contemplating no inclusion of "ranges" in the working papers, because they audit complex accounting estimates. Other firms report use of combinations of ranges and point estimates, with attention paid to excessively wide intervals. The constant balancing of audit evidence for decision-making purposes and compliance with general standards against litigious pressures is characterized in figure 2.

Disclosure

When auditors consider the high amounts of risk inherent in certain numbers, they are increasingly turning to footnote disclosure as a vehicle to deliver a message on such risks. Examples of disclosures cited as particularly effective include those by Martin Marietta and various health care companies, as displayed in table 2. Yet, some suggest that the use of footnotes in this manner passes the audit judgment to the financial statement user and strives to avoid the question of "fairness." Disputes proliferate as to whether disclosure of risk profiles of management's investment decisions, hedging activities, and the like should be value added in financial statement filings. Consider the disclosures on the junk bond investment practices of various financial institutions, in tandem with current mark-to-market discussions of standard setters. A key question appears to be the communication of risk and activities taken to balance risk, alongside where such communication belongs. Of course, there are those who are skeptical of moving from price to value, including A.C. Litteton, who wrote in 1929:

> Assuredly. . .value is a vague sort of thing, subject to all the whims of mankind and turned by the least wind of altered circumstances. . . .Whereas value is an estimate of what price ought to be, price itself is an established fact. . . .When accounting is loosed from this anchor of fact it is afloat upon a sea of psychological estimates, which, however important they may be to business management, are beyond the power of accounting, as such, to express (Parker 1965).

FIGURE 2 Litigation May Encourage Less Documentation of the Range of Estimates



Martin Marietta Corporation
1990 Annual Report, p. 32

In the fourth quarter of 1990, the Corporation established a reserve of $78 million ($1.00 per share) associated with the Corporation's investment in preproduction costs for the ADATS (Air Defense Anti-Tank System) program. The reserve was necessitated due to program delays and the increased uncertainties surrounding ultimate recoverability of the investment through the production and deployment of the system. While the U.S. Army program is currently continuing under a two-year stretch-out and reliability growth plan, there is no assurance that the program will ultimately go into production. Management believes that the costs associated with these preproduction efforts, which are essential for ultimately fielding the system, will be recovered should the ADATS system go into full production and deployment.

American Medical Holdings, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (August 31, 1990), pp. 41, 54

Contractual Programs

The Company's domestic hospitals serve some patients under government and privately sponsored insurance programs for which payment is made based on cost as defined under the programs or at predetermined rates based upon the diagnosis, plus capital costs, return on equity, and other adjustments rather than customary charges. Total net revenues from such programs were 36%, 34%, 34%, and 36% of total domestic hospital net revenues for the ten months ended August 31, 1990, the two months ended October 31, 1989 and the fiscal years ended 1989 and 1988, respectively. In addition, the Company has other contracted business which represented 21%, 21%, 20%, and 17% of total domestic hospital net revenues for the ten months ended August 31, 1990, two months ended October 31, 1989, and the years ended 1989 and 1988, respectively.

Revenues are presented net of reserve provisions to reduce customary charges to the estimated amounts receivable from such programs. The reserves provided have been deducted from accounts receivable pending final audit and settlement. Provisions for contractual allowances for the ten months ended August 31, 1990 for Holdings and AMI were $1.195 billion and $1.125 billion, respectively. The provisions for the two months ended October 31, 1989 and the two years ended 1989 and 1988 were $238 million, $1.261 billion and $1.263 billion, respectively. In management's opinion, the reserves provided are adequate to cover the ultimate liabilities that may result from final settlements.

Professional Liability Risks

In addition to the base premium paid to the insurance company, the Company is contingently liable for additional retrospective premiums with respect to each

(continued)

policy year. The company includes in its professional liability reserve the deductible portion of the professional liability risks of these hospitals which is $500,000 per occurrence. For the ten months ended August 31, 1990, Holdings and AMI paid $3,200,000 in premiums to this insurance company. For the two months ended October 31, 1989 and for the twelve months ended August 31, 1989 and 1988, AMI paid $800,000, $5,000,000 and $6,200,000, respectively, in premiums to this insurance company.

The Company is self-insured for the balance of its professional liability risks. As of August 31, 1990 and 1989, the unfunded reserve for self insurance was $112,300,000 and $110,900,000, respectively, of which $23,000,000 in fiscal 1990 and $16,000,000 in fiscal 1989 is included in current liabilities. The reserves for losses and related expenses are discounted to their present value based on expected loss reporting patterns determined by independent actuaries using a rate of 9%.

Columbia Hospital Corporation (December 31, 1990), pp. F12, F13, F18

Patient Revenues

Patient revenues are reported at the estimated amounts due from patients and third-party payors for services rendered, including estimated settlements under reimbursement agreements with third-party payors.

Columbia's hospitals and related healthcare entities provide care to patients in connection with agreements with third-party payors, including the Medicare and Medicaid programs, and certain managed care providers. These agreements provide for payments using mechanisms that are based upon established charges, cost of providing services, predetermined rates based upon diagnosis, fixed per diem rates, and discounts from established charges. The following table summarizes the percent of patient revenues from all payors in 1990, 1989, and 1988:

	Years Ended December 31		*Inception to December 31,*
	1990	*1989*	*1988*
Medicare	35%	33%	42%
Medicaid	7	8	6
Managed Care	10	9	5
Other	48	50	47
	100%	100%	100%

Contingencies

Columbia continually evaluates contingencies based upon the best available evidence. In addition, allowances for loss are provided currently for disputed items that have continuing significance, such as certain third-party reimbursements that continue to be claimed in current cost reports.

The principal contingencies are described below:

Patient Revenues—Certain third-party payments are subject to examination by agencies administering the programs. Columbia is contesting certain issues raised in audits of prior-year cost reports.

Epic Healthcare Group, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (Fiscal 1990), p. A-12

Net Operating Revenue and Uncompensated Care

Net operating revenue is recorded based on established billing rates less allowances and discounts for patients covered by Medicare, Medicaid and other contractual programs. Payments received under these programs, which are based on either the costs of services or predetermined rates, are generally less than the established billing rates of the Company's hospitals, and the differences are recorded as contractual allowances and/or contracted discounts. The reserves provided have been deducted from accounts receivable pending final audit settlement. Contractual allowances and contracted discounts amounted to $406,013,000 and $335,033,000 for fiscal 1990 and 1989, respectively. The provisions for uncompensated care of $61,800,000 and $54,680,000 for fiscal 1990 and 1989, respectively, are included in operating expenses.

Contingencies

Final determination of amounts earned under prospective payment and cost-reimbursement programs is subject to review by appropriate governmental authorities or their agents. In the opinion of management, adequate provision has been made for any adjustments that could result from such reviews.

Healthtrust, Inc.—The Hospital Company (August 31, 1990), p. A-9

Net Operating Revenue

Net operating revenue is based on established billing rates less allowances and discounts for patients covered by Medicare, Medicaid, and other contractual programs. Payments received under these programs, which are based on either the costs of services or predetermined rates, are generally less than the established billing rates of the Company's hospitals, and the differences are recorded as contractual adjustments and/or policy discounts. Net operating revenue is net of contractual adjustments and policy discounts of $804,429,000, $633,497,000, and $487,919,000 for fiscal 1990, 1989, and 1988, respectively. The provision for bad debts is included in operating expenses.

Note K—Commitments and Contingencies

The Company is self-insured for a substantial portion of its professional and general liability risks. At August 31, 1990, the reserve for professional and general liability risks was $102,581,000, of which $3,750,000 is included in current liabilities. The reserves for self-insured professional and general liability losses and loss adjustment expenses are based on actuarially projected estimates discounted to their present value using a rate of 6%. HCA retains the liability for all professional liability claims and claims which would be covered by a policy of comprehensive general liability insurance with a date of occurrence prior to September 1, 1987.

(continued)

Final determination of amounts earned under prospective payment and cost reimbursement activities is subject to review by appropriate governmental authorities or their agents. In the opinion of management, adequate provision has been made for any adjustments that could result from such reviews.

Hospital Corporation of America (1990), p. A-19

Liability Insurance

The general and professional liability risks of the Company are self-insured through a wholly-owned subsidiary for losses up to $25,000,000 per occurrence. The Company carries general and professional liability insurance from an unrelated commercial insurance carrier for per occurrence losses in excess of $25,000,000 with policy limits of $75,000,000 per occurrence and in the aggregate, on a claims-made basis. The reserve for general and professional liability risks is based on actuarially determined estimates.

Humana (August 31, 1990), pp. 27, 29

Accounting Policies

Hospital revenues are reported net of contractual allowances and are based upon amounts receivable from Medicare and other third parties. Health plan revenues consist of insurance premiums derived from group and individual prepaid health benefit and managed health care products.

Professional Liability Risks

The Company insures substantially all professional liability risks through a wholly-owned subsidiary. Provisions for such risks underwritten by the subsidiary, including expenses incident to claim settlements, were $64,206,000, $64,614,000, and $55,809,000 for the years ended August 31, 1990, 1989, and 1988, respectively. Amounts equal to provision for loss are funded annually.

National Medical Enterprises, Inc. (May 31, 1990), pp. 37, 43 (Note 6)

Net Operating Revenues

These revenues consist primarily of net patient service revenues which are based on the hospitals' established billing rates less allowances and discounts principally for patients covered by Medicare, Medicaid and other contractual programs. These allowances and discounts were $1,848,000,000, $1,420,000,000, and $1,091,000,000 for the years ended May 31, 1990, 1989, and 1988, respectively.

Payments under these programs are based on either predetermined rates or the costs of services. Settlements for retrospectively determined rates are estimated in the period the related services are rendered and are adjusted in future periods as final settlements are determined. After excluding the net operating revenues of the business transferred to The Hillhaven Corporation (see Note 2), approximately 28% of the remaining fiscal 1990 net operating revenues is from the participation of hospitals in Medicare and Medicaid programs.

Professional and General Liability Insurance

The Company insures its professional and comprehensive general liability risks through a wholly-owned insurance subsidiary and another insurance company

owned by several hospital companies in which the Company has a significant financial interest. Risks in excess of $3,000,000 per occurrence for general hospitals and corporate activities and $250,000 for specialty hospitals are reinsured with major independent insurance companies.

The Company's estimated liability for the self-insured portion of professional and comprehensive general liability claims is $62,000,000 at May 31, 1990, and has been discounted to its present value based on expected loss reporting patterns using a weighted average discount rate of 9.6%.

Nu-Med, Inc. and Subsidiaries (April 30, 1990), p. 25

Contractual Allowances

The Company's hospitals participate in several governmental and privately sponsored contractual programs that provide for different methods of reimbursement, including reimbursement based on cost or a diagnosis-related predetermined rate, plus a return on equity. The difference between the revenue recorded under each program and the anticipated reimbursement is recorded as a contractual allowance. Annual cost reports are generally submitted to and audited by agencies operating these programs. The Company records anticipated cost report settlements due from or to such agencies in the current year. A charge or credit to the amount recorded is recognized in the year of settlement as an adjustment to the provision for contractual allowances in that year's statement of operations. The provision for contractual allowances and uncollectible amounts amounted to $134,075,000, $122,170,000, and $129,395,000 for the years ended April 30, 1990, 1989, and 1988, respectively.

Malpractice Insurance Coverage

The Company maintains $50 million in professional and general liability insurance coverage. The first $500,000 is occurrence coverage, and the remaining $49.5 million is a modified occurrence coverage, containing a built-in prepaid 84-month "tail." An unlimited reporting tail is available for an additional premium. Certain specific facilities maintain an additional $10 million in coverage. In the opinion of management, sufficient reserves have been established for any potential deductible portions to be paid by the Company.

Republic Health Corp. & Subsidiaries (August 31, 1990), pp. 25, 26

Medicare and Other Reimbursement Programs

Settlement amounts due to or receivable from Medicare and Medicaid programs are determined by fiscal intermediaries. The difference between the final determination and estimated amounts accrued is accounted for as an adjustment to revenues in the year of final determination. Management believes that the provision for Medicare and other program settlements is adequate to cover final settlements.

Professional Liability Insurance

For professional liability claims asserted, the Company assumes professional liability risks up to $3,500,000 per claim and $10,000,000 in the aggregate. In

(continued)

1990, the company purchased a $10,000,000 layer of excess insurance above self-insured retentions that may be applied towards hospital professional liability and comprehensive general liability. The Company also purchased an additional $5,000,000 of excess claims-made insurance for comprehensive general liability only. In 1989, REPH purchased an $8,000,000 layer of excess insurance above self-insured retentions that may be applied towards hospital professional liability and comprehensive general liability. REPH also purchased an additional $2,000,000 of excess claims-made insurance above the $8,000,000 layer for hospital professional liability only and $7,000,000 in excess of the $8,000,000 layer for comprehensive general liability only. In 1988, the Company purchased $15,000,000 of excess claims-made insurance above the self-insured retention. Claims-made insurance limits coverage to claims asserted during the policy year. Actual hospital professional liability costs for a particular period are not known for several years after the period has expired. The delay in determining the actual cost associated with a particular period is due to the time between when an incident occurs and when it is reported as well as the time involved and costs incurred in resolution of such claims. Based upon an actuarial study, the Company maintains reserves for the future payments of asserted professional liability claims and for claims incurred but not reported which are not covered by insurance. The reserves for all years are recorded at net present value using a 12% discount rate. Certain amounts of cash are set aside and included in other assets to cover such claims.

Universal Health Services, Inc. (December 31, 1989), p. 20

Third Party Revenues

Net revenues include estimated reimbursable amounts from third-party payors such as Medicare, Medicaid, and other contractual programs. Amounts received under such programs are based on either cost or predetermined rates and are generally less than established billing rates which are the basis for recording gross revenues. The differences between the billing rates and reimbursable amounts as well as prior year settlements are recorded as contractual allowances. The allowances provided have been deducted from receivables pending final determination by intermediary agencies and, in management's opinion, are adequate to establish third-party receivables at realizable amounts. Medicare and Medicaid revenues represented 45%, 46%, and 45% of gross patient revenues for the years 1989, 1988, and 1987, respectively.

Commitments and Contingencies

The Company estimates the cost to complete major construction projects in progress at December 31, 1989 will approximate $18,000,000.

The Company is self-insured for its general liability risks for claims limited to $5,000,000 per occurrence and for its professional liability risks for claims limited to $25,000,000 per occurrence. Coverage in excess of these limits up to $100,000,000 is maintained with major insurance carriers.

As of December 1989 and 1988, the reserve for professional and general liability risks was $29,470,000 and $21,082,000, respectively, of which $5,436,000

in 1989 and $3,582,000 in 1988 is included in current liabilities. Self insurance reserves are based upon actuarially determined estimates.

Approximately $4,500,000 of cash is restricted and has been escrowed as a reserve for potential professional liability risks as required by certain state regulatory agencies.

Under certain agreements, the Company has committed or guaranteed an aggregate of $40,000,000 related to options to acquire hospitals, acquisition-related contingencies and loans.

Various suits and claims arising in the ordinary course of business are pending against the Company. In the opinion of management, the outcome of such claims and litigation will not materially affect the Company's consolidated financial position or results of operations.

Charter Medical Corp. & Subsidiaries (September 30, 1990), p. F-11

Net Revenue

Net revenue is based on established billing rates less estimated allowances for patients covered by Medicare and other contractual reimbursement programs and certain policy discounts. Amounts received by the Company for treatment of patients covered by Medicare and other contractual reimbursement programs, which may be based on cost of services provided or predetermined rates, are generally less than the established billing rates of the Company's hospitals. Final determination of amounts earned under contractual reimbursement programs is subject to review and audit by the appropriate agencies. Management believes that adequate provision has been made for any adjustments that may result from such reviews.

Unanswered Questions

Two important practice issues that continue to be largely unanswered questions relate to interim numbers. What is the quality of interim disclosures and to what extent is the auditor presently involved? Should auditor involvement be extended and if it were, what associated challenges exist with respect to interim estimates? Should all press releases including financial information be reviewed by the auditor of record?

Practice Questions and Implementation Issues

Before SAS No. 57, practitioners were largely performing the procedures detailed in the expectation gap standard. The literature noted:

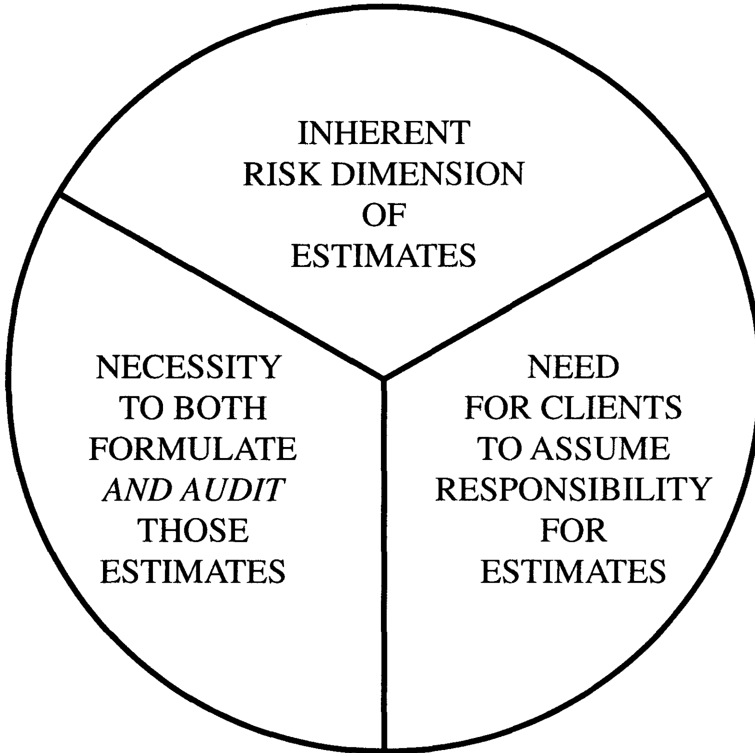
> the EDs [exposure drafts for the expectations gap] should be judged by their potential contribution to audit effectiveness, a shorthand for the larger criterion of contribution to the quality of financial reporting (Elliott and Jacobson 1987).

Practitioners interviewed acknowledge that the codification of SAS No. 57 provided greater attention to (1) the inherent risk dimension of estimates, (2) the necessity of not only formulating accounting estimates but also of auditing those estimates, and (3) the importance of clients assuming responsibility for the estimates that are audited in turn by the public accountant—especially in smaller client settings. These three effects of SAS No. 57 are illustrated in figure 3. The visibility of accounting estimates throughout the audit process is increasingly evident in firm literature. By and large, increased guidance is not sought within the SAS arena, but the industry guidance on particular estimates, such as loan loss reserves and insurance reserves (for example, Statement of Position [SOP] 92-4, *Auditing Insurance Entities' Loss Reserves*, a supplement to *Audits of Property and Liability Insurance Companies*, September 16, 1991), is applauded and continues to be sought on newer developments. The example of an area needing enhanced guidance is the intended meaning of "more likely than not" and the consequence of tax assets appearing on the books (Price Waterhouse 1991, 1992).

Small CPA Firms' Perspectives

Representatives of small CPA firms were interviewed as to whether their perceptions aligned with those of large-firm practitioners. Smaller firms' practitioners, as did their counterparts in larger firms, viewed SAS No. 57 as largely a "nonevent" that codified practice. They believe that they are less likely to be able to reduce control risk in the formulation of estimates for most small client settings, due to the informality or inadequacy of underlying processes and information bases. Moreover, with smaller clients, the CPAs most often assist in formulating the accounting estimates. These practitioners viewed SAS No. 57 as being associated with the increased boilerplate emphasis in management representation letters on the client's responsibility for accounting estimates, even when derived with the assistance of the CPA. Moreover, they cited the detailed direction in SAS No. 57 as being useful when the separate phase of auditing was conducted, apart from the accounting estimation process. They noted that the concern existed pre-SAS No. 57 that if a CPA helped to derive an accounting estimate, he or she might view that estimate to be reasonable, by necessity. The existence of SAS No. 57 makes it very clear that such is not the case; corroboration and an audit process must accompany the accounting assistance offered to a client. SAS No. 57 was similarly cited as a means of motivating enhanced record keeping by the client, due to cost consequences attendant to having the outside auditor both formulating and auditing estimates.

FIGURE 3 **Effects of SAS No. 57— More Attention to:**



Context and Exception Monitoring

The importance of context and the nature of the item being examined was repeatedly emphasized as crucial. Indeed, these considerations helped to guide the practitioner toward a range methodology or a point estimation approach. Moreover, one firm described its established practice of exception monitoring.

Specified ratios are computed and if an estimate represents a certain percentage of equity or percentage of reserves, the issue is "bumped up" for review within the firm. That group has found that the age of the company and the product line at hand often explain such exceptions. About 10 to 20 percent require follow-up procedures. Small companies are particularly problematic, as are unusual types of business and insufficient data. Although these problems are unlikely to disappear, an increasing role for expert systems is that of screening to ensure that such "trouble spots" are recognized, in order to facilitate individual attention being directed to evaluating the reasonableness of associated estimates.

The concept of a "peer review" team of specialists to scrutinize aspects of developing practice was revealed in a number of interviews with practitioners. For example, one firm has a group who will review all proposed tax asset creations under the recently issued SFAS No. 109, *Accounting for Income Taxes.*

> Reduce deferred tax assets by a **valuation allowance** if, based on the weight of available evidence, it is *more likely than not* [a likelihood of more than 50 percent] that some portion or all of the deferred tax assets will not be realized. The valuation allowance should be sufficient to reduce the deferred tax asset to the amount that is more likely than not to be realized [emphasis added] (FASB 1992).

This requirement that management estimate and consider future taxable income in determining a valuation allowance poses a particular challenge (Price Waterhouse 1991, 1992).

Independent Estimation Versus Reviewing Management's Estimation Process

As already suggested, a need exists to understand management's estimation process apart from routine data-processing activities. This responsibility is clarified in both SAS No. 55, *Consideration of the Internal Control Structure in a Financial Statement Audit,* and SAS No. 57. Nonetheless, interviews repeatedly expressed a substantive test preference as an effective means of understanding other factors considered by management, versus those considered relevant by the auditor. Some firms are using modeling as an explicit way to test their estimates, relative to those of management, and

relative to incremental approaches to testing explanations of variations between the estimates of management and auditors. The choices among alternatives in the verification process are well explicated in the literature of nearly forty years ago:

> Verification in research and analysis may refer to many things, including the correctness of mathematical and logical arguments, the applicability of formulas and equations, the trustworthiness of reports, the authenticity of documents, the genuineness of artifacts or relics, the adequacy of reproductions, translations and paraphrases, the accuracy of historical and statistical accounts, the corroboration of reported events, the completeness in the enumeration of circumstances in a concrete situation, the reliability and exactness of observations, the reproducibility of experiments, the explanatory or predictive value of generalizations (Machlup, 1955).

Interrelationship With Generally Accepted Accounting Principles and Generally Accepted Auditing Standards

SFAS No. 5 is receiving increased attention as the conceptual platform for all accruals of uncertainties. The questions posed in this guidance include: Did the condition exist at the relevant date, is it probable, is it estimable, and does it have a distribution as described in FASB Interpretation No. 14, *Reasonable Estimation of the Amount of a Loss*, that permits the lower bound to be recorded? The United States General Accounting Office (GAO) has questioned whether "probable" has become an ill-defined term that at times has been treated as virtual certainty and is increasingly calling for a "more likely than not" revision (Bowsher 1991; GAO 1992). Note that two sources of measurement error are implied: (1) the usual "noise" resulting from subjective estimation of probabilities, and (2) the added "noise" from having divergent objectives in such estimates due to misunderstanding of what the Financial Accounting Standards Board (FASB) intended to be "probable" (e.g., 50 or 75 percent). The intriguing question has been posed as to why Postemployment Benefits (OPEB) had to be a separate pronouncement given SFAS No. 5 has been in place all along? Similar questions are being raised regarding environmental liabilities.

Many view SAS No. 31, *Evidential Matter*, on assertions as a critical conceptual framework in which estimates can be evaluated and audited. Others integrate the attention of SAS No. 47, *Audit Risk and Materiality in Conducting an Audit*, and SAS No. 55, *Consideration of the Internal Control Structure in a Financial Statement Audit*, to the role of the control environment. However, interviews suggest the widely held belief that

controls are less likely over presentation, disclosure, and valuation assertions—the heart of the SAS No. 57 focus.

Another related pronouncement is SAS No. 61, *Communication With Audit Committees.* Since this requires increased communication, an improved understanding by the corporate governance framework is expected. The audit committee will have an understanding of where significant evaluative judgments are used and how they are determined.

Finally, audit industry guides are applauded in the accounting estimate area. In particular, interviewees pointed to the 1986 Auditing Procedure Study, *Auditing the Allowance for Credit Losses of Banks*, as having within its pages the content of the later SAS No. 57, issued in 1988.

Estimation challenges have and are expected to continue to grow. SFAS No. 97, *Accounting and Reporting by Insurance Enterprises for Certain Long-Duration Contracts and for Realized Gains and Losses from the Sale of Investments*, the tax pronouncement's "more likely than not" threshold, and similar developments may merit additional accounting interpretations to assist practice.

Regulatory pressures are likewise growing in the estimation area. Quarterly evaluation of numbers in reserves and increased regulatory attention to disclosure of responsible parties in environmental matters are two areas of present concern.

Plausible Challenges

The disclosure of accounting estimates and the associated audit process has been increasingly directed to the Management Discussion and Analysis (MD&A) section of public filings. It is viewed as an opportunity to narrow the expectations gap through broadened discussion. The points highlighted include the concept of the estimation process not being a science, a description of the thought process actually used, and examples of the outcome of such a process. The description of significant accounting policies is another forum to describe estimates and the degree to which they may be influenced by the surprise element in certain lines of business. The magnitude of effect is the guide in determining disclosure practice. Table 3 provides a set of MD&A disclosures for CIGNA Corporation.

Another possible forum for disclosure is the audit report itself: uncertainty descriptions, scope limitations, and client-imposed or circumstances-imposed limitations (and whether this distinction is relevant). Additional practical direction is desired by some interviewees, who expressed concern that the lack of clarity may decrease the warning capability of the auditor's report mechanism.

Control reports, should they become more commonplace, provide another forum in which the role of accounting estimates can be communicated.

TABLE 3 An Example of Management's Discussion and Analysis Disclosure Practices

CIGNA Corporation
Form 10-Q (pp. 8, 16, 17)
September 30, 1991

CIGNA's businesses are subject to the effects of a changing social, economic, and regulatory environment. These include efforts to restrict insurance pricing and the application of underwriting standards and to expand regulation. For example, Proposition 103, a 1988 California ballot initiative, required rate reductions for most lines of property and casualty business and contained "rate rollback" provisions that could require insurers to make premium refunds to their customers. In October 1991, the California Insurance Commissioner ordered numerous property and casualty insurers to make premium rebates pursuant to emergency regulations adopted by the Commissioner. CIGNA was ordered to refund approximately $43 million in premiums and accumulated interest. The Commissioner's actions are being challenged in state and federal courts on constitutional and other grounds. CIGNA intends to defend itself vigorously and believes that any amount that it may eventually be required to refund will not be material.

Reserves

CIGNA's property and casualty reserves are management's estimate of future amounts needed to pay claims and related expenses for insured events that have occurred, including events that have not been reported to CIGNA. CIGNA's reserving methodology is described in its 1990 Annual Report on Form 10-K, beginning on page 12. The description explains case and bulk reserves, when such reserves are established, the basis for establishing and updating them, and the uncertainties that are inherent in the reserving process. The following discussion addresses reserving issues that are peculiar to asbestos-related and environmental pollution claims.

Asbestos-related Claims

Since the early 1980s, underwriting results have been affected adversely by asbestos-related claims. The majority of claims allege bodily injury resulting from exposure to asbestos products. A smaller number of claims allege damage to buildings as a result of the presence of asbestos.

CIGNA recognized in late 1985 that the limits of liability of certain policies were likely to be exhausted by claims payments on behalf of certain insureds named as defendants in numerous asbestos cases. For those policies, CIGNA has reserves equal to the applicable limits of liability, minus payments made to date and reinsurance recoverables, plus an estimate of the associated future expenses of litigation. For claims that may arise under other policies, CIGNA has reserves for reported claims but not for unreported claims or for litigation expenses.

Significant uncertainties prevent CIGNA from estimating the future amounts that may be needed for these unreported asbestos-related claims. For example,

(continued)

TABLE 3 An Example of Management's Discussion and Analysis Disclosure Practices *(continued)*

it is not possible to estimate the number and value of claims that might be made or the universe of asbestos-related exposures. In addition, significant issues in the building cases are in dispute, including whether insurance coverage exists at all and, if it does, what policies provide the coverage.

In July 1991, the 27,000 asbestos bodily injury actions that were pending in pre-trial stages in the federal courts (some of which involve CIGNA insureds) were consolidated in a single forum. It is not known whether this consolidation, which does not involve the much larger number of claims in state courts and does not relate to building claims, will speed or retard the resolution of claims, or decrease or increase the cost (including litigation expenses) of settling claims. The uncertainties inherent in valuing asbestos-related claims are not likely to be resolved in the near future.

Environmental Pollution Claims

Since the mid-1980s, CIGNA has experienced significant increases in the number of claims for losses involving alleged environmental pollution. CIGNA establishes reserves for reported environmental pollution claims.

CIGNA does not establish reserves for unreported claims or for costs of litigation because significant uncertainties prevent CIGNA from estimating the amounts that may be needed for them. The courts have addressed coverage issues regarding pollution claims and have reached inconsistent conclusions on several issues, including the following: whether insurance coverage exists at all; what policies provide the coverage; when an insurer has a duty to defend; whether the release of contaminants is one or more "occurrence" for purposes of determining applicable policy limits; how pollution exclusions in policies should be applied; and whether clean-up costs constitute covered "property damage." These issues are not likely to be resolved in the near future.

These coverage issues and additional uncertainties make even the estimation of liability of reported claims difficult. For example, at any given clean-up site, the allocation of financial responsibility among those potentially liable varies greatly, depending on such factors as volumetric contribution, relative toxicity, number of years active at the site, extent of impairment to the environment and ability to pay. A "potentially responsible party" may have no liability, may share responsibility with hundreds of others or may bear the cost alone. Developing the information necessary to evaluate these issues takes years.

Financial Effect

CIGNA expects that, with the exception of losses under the policies described above whose limits of liability are reflected in asbestos reserves, future results will be adversely affected by losses for unreported asbestos-related liabilities, for unreported environmental pollution liabilities and for litigation expenses for reported and unreported asbestos-related and environmental pollution liabilities.

Management's Point of View

It would seem desirable to pursue booking of the most likely balance. Since estimates are more susceptible to manipulation by management, through bias, if not a deliberate intent to misstate, care must be taken in both assessing risk and in auditing the numbers put forward. A boundary can be invoked between inherent and control risk. Some interviewees indicated that they view inherent risk as driven externally from outside of the company, whereas control risk is driven by internal activities of management. Indeed, this demarcation seems to work to some extent when analyzing guidance directed to property and liability insurance companies, since inflation, the legal environment, and regulations are cited as inherent risk, with control structure and data base issues cited as control risk determinants (AICPA 1991). Such a perspective facilitates the auditor's understanding of what is "opinion" and "expectation" of outside effects, as distinct from controllable policy of a firm, as various estimates are evaluated.

Industry-Level Guidance

Guidance is often viewed as an infringement on audit judgment. The internal guidance of a firm tends to be driven by standardization goals from within and is expected to vary in the context of the particular firm's technology and structure (Wallace 1991b). Most interviewees championed an account-by-account focus within industry guides (as in the AICPA guide *Audits of Providers of Health Care Services*) as distinct from an "estimates" directed extension of guidance similar to SAS No. 57.

Regulatory Interest

Regulators increasingly understand the economic consequences of accounting estimates and are, indeed, the creators of one source of estimates —regulatory costs, associated compliance costs, and, potentially, litigation exposure. Pressures increasingly challenge regulators' oversight of the accounting profession, as estimates are demonstrated as not being fully reflective of eventual outcomes. The importance of communicating the future forecast nature of some numbers in the financials and the avoidance of a "Monday morning quarterback's" mentality need to be shared across the profession and the regulatory bodies.

One must recognize the sometimes conflicting perspectives of the regulatory arms. Although opinion-shopping concerns lead to 8-K timely filings, the Federal Trade Commission concurrently pushes to allow commissions to be within the compensation framework of public accountants—at least potentially creating conflict-of-interest perceptions. The history in the

financial markets of Congress and regulatory bodies' direction of regulatory accepted accounting practices (RAAP), at increasing odds from generally accepted accounting principles (GAAP), provides a related perspective (Wallace 1991c). An overall governmental regulatory policy may be useful in avoiding some of the paradoxical outcomes of recent times.

Perception Issues

A key perception problem is that some users may believe that a soft number becomes hard, merely due to the auditor's involvement. Clearly, this is not the case. Steps need to be taken to help adjust the perception.

More environment-driven pressures to consider estimations are evident. For example, increased risks exist in contracting by financial institutions, insurance companies, and defense contracting, to name a few.

An example in aerospace, where there are more important but less precise numbers, is the evolution in contracting with fixed-price arrangements. In contrast, for health care, diagnosis-related groups (DRGs) are seen by practitioners as easier for hospitals than cost-based settlements, in terms of the precision of numbers tied to diagnostic reimbursement groups. Yet, self-insurance estimates create added risks for these same clients. In other words, the shifting of risk may be within an industry and may be among areas of operation within a company in an industry. Many practitioners point to the financial arena and fair value footnote disclosures as sources of increased need for estimations and a growth in related reporting risks. Asset securitizations are being discussed from a risk perspective, and questions are being raised as to the adequacy of related disclosures.

Firms' Responsiveness to the Environment

The real challenge appears to be that CPA firms need to be increasingly responsive to the environment to get ahead of the risk curve, so to speak. The change in the real estate markets, health care, and risk patterns in a variety of markets need to be identified on a timely basis and addressed throughout the accounting and auditing process. Greater attention should be paid to planning and supervision, since these are the phases that can best address such shifting of risks. If practitioners can successfully locate the risks and not only be reactive but forward looking, the chance exists to assess the risks as the transactions arise. Otherwise, the aftermath can be problematic.

Two areas that seem to have implications for the profession are OPEB and "green accounting." Why has it taken approximately two decades to achieve OPEB, and is the environmental area different? Consider the disclosure of Union Carbide in its December 31, 1990 10-K:

> Estimates of future costs of environmental protection are necessarily imprecise due to numerous uncertainties, including the impact of new laws and regulations [such as the Clean Air Act of 1990] the availability and application of new and diverse technologies, the eventual outcome of insurance coverage litigation in which the Corporation is engaged, the identification of new hazardous waste sites, and, in the case of Superfund sites, the ultimate allocation of costs among PRP's. Nevertheless, the Corporation estimates that worldwide expenses for environmental protection, expressed in 1990 dollars, should average about $200 million annually over the next five years. Worldwide capital expenditures for environmental protection, also expressed in 1990 dollars, are expected to average about $120 million annually over the same period.

Can we get ahead of "established practice" so that SFAS No. 5 can suffice to encourage the necessary accruals and disclosures? It would appear appropriate for standard setters to contemplate whether lessons learned can help guide future pronouncements. A number of related research and practice issues are detailed by Roussey (1992). As researchers struggle to set a relevant scope for research, we should all remember:

> Breakthroughs in scientific research often come from unexpected places: therefore, *it ill behooves accountants to rule out any area of research.* Instead, if we are to follow the scientific norm we will do our individual research on the basis of our individual beliefs about the likely source of answers, while at least tolerating, preferably encouraging, others to do likewise. This strategy increases our chances of achieving breakthroughs [emphasis added] (Robert R. Sterling's 1979 book, *Toward a Science of Accounting*, cited by Stamp 1981).

Prescriptions

Audit standard setters should develop general guidance explaining when an exposure is *estimable*, the extent to which footnotes substitute or complement SFAS No. 5 requirements, and how audit reports should be used to communicate related uncertainties.

I join the increasing number of voices that observe:

> Currently there are multiple interpretations of the term, *probable*, even at a conceptual level. It has become one major source of variation in practice in the applications of GAAP regarding loss contingencies. Removing ambiguity in the meaning of the term could potentially enhance the treatment of future events and indirectly the treatment of assets and liabilities (Beaver 1991).

Opportunities exist for clarifying the formation and audit of accounting estimates in particular industries through industry guides. Figure 4 summarizes implementation problems, one reason for the emerging expectation gap, research needs, and standard-setting needs. As we ponder how best to approach estimates, we must recognize that limitations of accounting are part of our reality.

> There is no prospect that accounting can ever parallel the development of physics, because the nature of physical reality is so totally different from the reality with which accountants must deal.
>
> Nor is there any prospect that this situation will ever change. Value, and hence (as Sterling observes) income, are future-oriented concepts. It then is uncertain, and fraught with risk. Markets are imperfect, and they are also incomplete. Human decision making processes (for which accounting valuations are the input) are of almost infinite variety, complexity, and variability. In most, perhaps all, cases they are imperfectly understood even by the people who use them (Stamp 1981).

FIGURE 4 An Overview

Implementation Problems	Emerging Expectation Gap	Research Needs	Standard Setting Needs
Definition of • PROBABLE • ESTIMABLE • UNCERTAINTY and how to COMMUNICATE SUCH ATTRIBUTES	Does a single number imply greater accuracy than intended?	• How to identify CHANGING RISKS • Assess PROBABILITIES • Communicate UNCERTAINTIES	Industry Audit Guides: account-level guidance on estimates CLARIFICATION OF probable, estimable, and uncertainty communication via audit reports

Appendix

Interviewees:

Harold Monk	Davis, Monk & Company
Pat Callahan	Frederick B. Hill & Co.
George Lewis	Broussard, Poche, Lewis & Breaux
Morton B. Solomon Vern Johnson Pete Minan	KPMG Peat Marwick
Donald L. Neebes R.L. Brezovec Michael D. Giese J.E. Katzenmeyer L. Kramer J.G. Weaver W.B. Zell	Ernst & Young
Walter R. Bogan Ralph Hoffman	Price Waterhouse

Note: Comments forwarded by James E. Brown, of Baird, Kurtz & Dobson, are reflected in this inquiry.

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Research in Analytical Procedures: Implications for Establishing and Implementing Auditing Standards

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This paper presents a framework and review of the research in analytical procedures, with the objective of developing the implications of this research for revising and implementing auditing standards in this area. The review of the research is developed in four categories: (1) descriptive research, *which studies how analytical procedures are used in practice; (2)* methods research, *which investigates the effectiveness of different types of analytical procedures; (3)* expertise research, *which studies the decision processes of auditors; and (4)* bankruptcy models, *which have used analytical procedures. In summary, the research shows that analytical procedures are used extensively, and are perceived to be effective, although studies have shown that preliminary analytical procedures based on simple trends and ratios may have limited usefulness. In contrast, model-based procedures, such as regression analysis, have been shown to have a good degree of effectiveness, primarily in case studies. The findings for expertise show that although expertise is related to differences in knowledge, it does not appear to be related to conventional measures of audit experience. The final section of the paper presents suggestions for future research and a discussion of auditing standards in three key areas: (1) the* usage *of analytical procedures; (2) the* effectiveness *of analytical procedures; and (3) the required* expertise *for auditors using analytical procedures. The paper calls for research on the effectiveness of analytical procedures, and study of the nature of auditor expertise in analytical procedures, particularly the role of the auditor's knowledge structure and outcome feedback. A discussion of SAS No. 56 suggests new wording for paragraph 5 to give additional focus on the estimation process underlying analytical procedures, and a rewording of paragraph 21 to change from a search for nonerror causes to a search for error causes, to reduce the bias toward incorrect acceptance in the current wording.*

Prompted in part by the increasing attention given to them by practicing auditors (Tabor and Willis 1985), analytical procedures have been an area of increased attention by standard setters as well. SAS No. 56 (1988) has significantly extended and improved the guidance available to auditors before 1988 by including the requirement that analytical procedures be used in the planning and review phases of the audit, by providing greater specificity about the role of analytical procedures in each of the three phases of the audit, and by identifying the criteria the auditor should use in selecting and evaluating analytical procedures. Moreover, there is evidence that the research has provided useful guidance to the Auditing Standards Board in the development of the current professional guidance on analytical procedures, SAS No. 56 (Loebbecke 1987). And we believe that further research can serve to improve this guidance even more. It is, therefore, a timely and agreeable task for us to review this research, and to consider the contributions it has made and can still make to current professional guidance and the practice of analytical procedures.

Research Objective

The objective of this paper is to present the implications of existing research for establishing and implementing auditing standards in the area of analytical procedures. The paper also reports our efforts to identify implementation issues and issues arising from research results that were not addressed by SAS No. 56 or that have arisen since SAS No. 56.

The second section of the paper reviews a relatively comprehensive set of research works on analytical procedures that have appeared in the recent two decades. This review follows the research model outlined in table 1 and explained below. After this review, we consider the implications of this research for professional guidance and the practice of analytical procedures in section three, and provide recommendations for future research in section four. These last two sections are organized into three parts, each of which addresses a key area of guidance and research: (1) the *usage* of analytical procedures, (2) the *effectiveness* of analytical procedures, and (3) the required *expertise* for auditors using analytical procedures.

Review of the Research

There has been a significant amount of research into the use and effectiveness of analytical procedures in recent years. Our review attempts to provide a comprehensive look at this work, and to identify the key findings that are relevant to consider current guidance and implementation issues. A total of eighty-three papers were reviewed. These papers are classified into

TABLE 1 A Research Model for Analytical Procedures

Descriptive Research—Usage of Analytical Procedures
- Theoretical and descriptive research about analytical procedures
- Research about the usage of different types of analytical procedures
- Research about implementation issues of the use of analytical procedures in audit practice

Analytical Review Methods—The Effectiveness of Analytical Procedures
- Research that addresses effectiveness generally
- Research that looks at the effectiveness of specific types of procedures
  - Trend analysis
  - Ratio analysis
  - Regression analysis
  - Other methods

Expertise in Using Analytical Procedures
- Research that examines the cognitive processes of auditors using analytical procedures
  - Heuristics and biases
  - Knowledge structures
  - Subjective, unaided estimation
- Research into how auditors select procedures and how they develop risk assessments
- Research into the use of decision aids for analytical procedures

The Use of Analytical Procedures in Estimating Bankruptcy
- Estimation models
- Subjective judgment

our overall research model, which is outlined in table 1. The research is in four broad categories. *Descriptive research* is the type of research that attempts to understand the way analytical procedures are used in practice, or how they *should* be used. This type of research is often based on survey findings. Alternatively, it is sometimes based on the deductive reasoning of the authors, or on the logic implicit in an analytical model that is developed by the authors. This research helps us understand the nature of analytical procedures and how they are or can be used in practice.

The second category of research, *methods research*, investigates the effectiveness of different types of analytical procedures. A large portion of these studies have looked specifically at the effectiveness of regression analysis, and have analyzed the benefits of regression over other methods, and the differences in effectiveness when regression is used with a variety of investigation rules. Other studies in this group have looked at ratio analysis procedures, and more recent work has looked at possible new procedures, including those based on new technologies such as neural networks.

The third category of research, *expertise in analytical procedures*, has the objective of understanding the decision processes of auditors and others when performing analytical procedures. These works have identified auditors' judgment biases when using analytical procedures. Other studies have identified certain knowledge structures or decision processes that are associated with auditors performing analytical procedures. In addition, a number of papers have begun to investigate the nature of auditors' expertise in analytical procedures.

The final category, *bankruptcy prediction*, reports the findings of a small set of papers that have looked at the use of analytical procedures in assessing bankruptcy. Although many of these papers have developed prediction models, others have examined the usefulness of these models in auditing, and still other papers have examined the ability of auditors to predict bankruptcy unaided by the models.

Each research paper reviewed for this report is summarized in the Appendix. The Appendix shows briefly the questions addressed in each paper and the major findings of the paper. In addition, the number of papers by research category is shown in table 2. In this section we present some of the highlights of this review.

Descriptive Research

A common theme for the papers in this group is that analytical procedures are used extensively and are expected to be very effective in identifying errors and irregularities. Papers by Biggs and Wild (1984), Daroca and Holder (1985), and Tabor and Willis (1985), among others, document the extensive usage of analytical procedures, even before SAS No. 56. In addition, Coglitore and Berryman (1988) point out that simple analytical procedures could have been used to identify the fraud in many of the notorious management fraud cases in the last fifteen years. Also, Reneau (1991) shows analytically how even relatively imprecise analytical procedures can be expected to be useful in detecting errors and irregularities. Using a survey of actual audit engagements, Hylas and Ashton (1982) and Wright and Ashton (1989) find evidence that a significant portion of material financial statement errors are initially signaled by analytical procedures.

In contrast, Kinney and Haynes (1990) consider the statistical and behavioral biases in performing analytical procedures, and conclude that there are significant inherent limitations of analytical procedures. The authors suggest that research continues to help discover the nature of the statistical and behavioral biases, and the means to alleviate them. On balance, the research in this group indicates that analytical procedures are used extensively, and there is some case-based and survey research indicating that, subject to certain inherent limitations, the procedures can be very effective.

TABLE 2 Summary of Research of Analytical Procedures

Primary Category	Secondary Category[1]					Empirical
	No.	*Rev.*	*E&E*	*Reg.*	*Rat.*	
Descriptive Research (Usage)						
Analytical review in general	10	3	1	1	1	
Analytical review methods						
Various	5	1	5	2		4-F
Specific	3	1			1	1-F
Use of analytical review in practice	3					1-F, 2-S
	21					
Analytical Review Methods (Effectiveness)						
Various	12	1	12	3		4-F,3-S,1-E,1-SM
Specific						
Ratio analysis	5					2-FC
Regression analysis	10		5			4-F,4-SM
Other methods[2]	9		6			3-F,1-SM
	36					
Expertise in Analytical Review						
Cognitive processes	9	1				5-E,3-P
Selection of procedures	4					2-E,1-P
Generation of expected values	3					3-E
Use of decision aids	2					2-E
	18					
Bankruptcy Prediction Using Analytical Procedures						
Prediction model	2					2-FC
Subjective judgment	5					4-E,1-F
Use of ratios	1	—	—	—	1	1-FC
	8					
	83	7	29	6	2	18–[F]ield study 5–[S]urvey 17–[E]xperiment 4–[P]rotocol analysis 6–[SM]imulation 5–[FC]ield study using 55 corporate data base

Notes:

(1) *Key:* Rev. = Literature Review; E&E = Effectiveness and Efficiency; Reg. = Regression; Rat. = Ratio Analysis.

(2) These include time series models, bivariate models, index models, general financial modeling, and prediction from various company characteristics.

Methods Research

The second category of research, studies that have investigated the effectiveness of various types of procedures, has provided useful information on the relative effectiveness of the three types of procedures. The three principal types of analytical procedures are *trend analysis*, *ratio analysis*, and *modeling techniques*.

Trend analysis consists of the analyses in which the trends of the account balances are examined as a basis for determining whether the current period data are potentially misstated, that is, whether they depart significantly from the prior trend of the data. Trend analysis techniques vary in complexity from the simplest two-period comparisons to statistically based time-series models. Trend analysis is the most commonly employed analytical procedure. As we shall see, it is also the least effective of the three types of procedures.

Ratio analysis is the term used to describe procedures that involve the simultaneous analysis of two or more financial statement accounts. Common examples are the inventory turnover ratio and the other turnover ratios, gross margin as a percent of sales, and other "common size" ratios, such as each expense account taken as a percent of net sales. The value in using ratios is that often the relationship between the two (or more) accounts in the ratio is relatively stable over time, therefore, a variation in a ratio is a direct and clear signal of an underlying unusual condition—either a fraud, a simple error, or simply an unusual combination of environmental events. Ratio analysis is potentially a far more useful method for detecting error and fraud than trend analysis because it uses the assumed stable relationship between accounts, whereas trend analysis looks only at the behavior of a single account. The behavior of a ratio is expected to be stable, whereas a single account balance can change for a number of reasons related to normal operating factors that do not reflect error or fraud.[1]

A third type of analytical procedure, based on modeling, can be more effective than either ratio analysis or trend analysis. The modeling approach is distinguished by the attempt to identify meaningful, stable relationships *between financial and operating data.* Two examples of the modeling approach are the *reasonableness test* and *regression analysis.*

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[1] In this paper, ratio analysis is defined specifically as the ratio between financial statement accounts, and, therefore, excludes ratios between accounts and operating data or external data. The relationships between financial and operating data are important; in this instance the operating data are often used to develop a forecasting model for the account data. Because of the modeling aspect, we refer to the use of this type of ratio as a modeling approach. For example, the ratio of total payroll expense to number of employees could be used to "model" or predict the average pay rate as a basis for assessing the reasonableness of the reported payroll expense.

A common type of modeling approach, the reasonableness test involves the use of selected operating data and sometimes additional financial data and data external to the firm, to predict an account balance. Reasonableness tests of expense accounts are the most common. One example is, the auditor estimates a value for utilities expense based on average temperature and hours of operation. A second example is the estimation of payroll expense from operating data on number of employees, average pay rates, and the number of days of applicable operations.

The reasonableness test is effective because it links financial data directly to relevant operating data. When, as is often the case, variations in operations are the principal cause of variations in the related accounts (especially the expense accounts), reasonableness tests provide a relatively precise means of detecting errors and irregularities affecting an account. This is particularly true for fraud cases. When a fraud is committed, it is likely that the reported financial and operating facts will not agree, that is, the perpetrator will find it difficult to disguise both the financial data and the related operating data. For example, a reasonableness test of payroll expense can be an effective means of detecting fraud wherein there are "phony" employees or excess time charged, because operating records must also be manipulated fraudulently in the same pattern to prevent detection.

A second important type of modeling in analytical procedures is regression analysis. In regression analysis, the auditor develops a prediction model of the account (dependent variable) from relevant financial data, operating data, and external financial data (independent variables). In contrast to the deterministic relationships in the reasonableness test model described above, regression analysis is based on derived statistical relationships among the selected independent variables and the dependent variable. Regression analysis is widely viewed as a potentially useful analytical procedure, because of the benefit of modeling the auditor's expectation and because of the inherent precision of the statistically derived predictions and related measures of prediction error.

Many of the studies have assessed the effectiveness of regression analysis vis a vis other procedures, or have considered the relative effectiveness of different rules of investigation used in regression analysis. Kinney, Knechel, Wilson, and many others have contributed here, with results that broadly support the effectiveness of regression. One achievement of the research in this area is the demonstration of the clear superiority (aside from issues of cost/benefit and required expertise) of the regression procedure in detecting material errors.

A second important stream of research in this group is reflected in studies that have looked at the effectiveness of *preliminary* analytical procedures, primarily trend- and ratio-based procedures. Papers by Loebbecke and Steinbart (1987), Kinney (1987), and Blocher and Cooper (1988) have shown these procedures to be relatively ineffective at detecting material error.

On balance, the research in this category has produced results that are consistent with our understanding of the potential usefulness of the different procedures. The relatively simple preliminary procedures (trends and ratios) are found to be somewhat less effective than the more extensive model-based procedures such as regression analysis.

Expertise Research

The third category, research of expertise in analytical procedures, has the objective of understanding auditors' decision processes in analytical procedures. Some of the earlier work focused on decision behaviors of auditors, particularly the potential biases that had been observed in a variety of decision settings, and were expected to be seen also in auditors performing analytical procedures. More recently, the research has focused on cognitive issues, to determine the knowledge structures and thought processes of auditors using analytical procedures. A common methodology for these latter studies is the use of protocol analysis, in which the auditor verbalizes a trace of that auditor's thought processes while performing the procedures.

The research that has looked at behavioral issues has found that a number of decision biases, which are common in decision making, are also observed in auditors using analytical procedures. For example, Libby (1985) observed the *availability bias*, the tendency to perceive events (in this case, errors) as more or less likely depending on the perceived frequency of the event, and the recency of an occurrence.

In a similar investigation, Kinney and Uecker (1982) found that auditors performing simple trend analysis were subject to the *anchoring and adjustment* bias, because they relied inappropriately on prior year balances in developing an expectation of the current year's balance for an account. Biggs and Wild (1985) and Heintz and White (1989) replicated this finding.

Another series of studies looked at the auditors' ability to make unaided predictions as part of a trend analysis procedure. Biggs and Wild (1985) found that auditors made significant prediction errors, which were consistent with the errors observed by other decision makers in an unaided prediction task. Blocher (1985), Heintz and White (1989), and Kaplan (1988) replicated this finding. In summary, the research has shown that auditors, like other decision makers, are subject to certain pervasive behavioral decision biases. Little has been done, however, to study the means by which these biases might be alleviated.

Another important set of studies investigated auditors' use of analytical procedures and their related decisions about the extent of detail testing. The consistent finding of these studies is that auditors do not use analytical procedures to reduce detail tests (Biggs, Mock, and Watkins 1988; Blocher, Esposito, and Willingham 1983; Cohen and Kida 1989).

Cognitive research focuses on decision processes and cognitive structures (memory, perception, etc.) in contrast to decision behaviors. These studies tend to look at the potential relationships among performance, experience, knowledge, and memory structures. This is a rapidly growing area of research. The available work shows in part that:

- Novices and experts have different memory structures (Biggs, Mock, and Watkins 1988, 1989).
- There is apparently little association between experience and performance (Davis 1991).

The finding that experience could not be associated with performance in analytical procedures is explored further in Blocher, Bouwman, and Davis (1992), which observes that a crucial issue regarding performance and the development of expertise in analytical procedures is the *need for unambiguous and accurate outcome feedback.* Without effective outcome feedback it is not possible to "learn from experience," and, therefore, developing better performance with analytical procedures will require experience that includes direct and effective feedback, and information about the effectiveness of each specific procedure in each context—its ability to signal error and irregularities. Blocher and colleagues recommend that improvements in the performance of analytical procedures will require improvements in education and training that focus on the causal modeling of analytical procedures (linking the procedures to specific error types, such that the link can be "tested" later by direct feedback), and the accumulation of feedback-relevant data as part of the audit.

For example, when analytical review results are favorable, and overall risk assessments are favorable, the auditor will likely not perform additional investigation to discover errors. However, this action also means that the auditor is unlikely to find out if the analytical procedure was a "miss." For this reason, the auditor must follow up on at least some portion of analytical review results that are favorable, *simply for the objective of determining if the procedure was effective.* The idea here is that for *quality control* purposes, it will be important for the auditor to do some investigations that are not required for a specific audit, but must be done as part of an on-going effort to observe and calibrate the diagnosticity of the analytical procedures that are being used.[2]

We have not included comment on bankruptcy model research in the body of this paper, although the papers we reviewed are summarized in the Appendix. We elected to exclude this aspect of analytical procedures because of its appropriateness to the discussion of SAS No. 59, *The Auditor's*

[2] Note that a similar investigation may not be necessary for detail tests, such as audit sampling applications, since these tests have a statistically measured risk of incorrect acceptance.

Consideration of an Entity's Ability to Continue as a Going Concern, another topic of this conference.

Issues for Standard Setting and Implementation

Recognizing that SAS No. 56 has provided a significantly greater clarity regarding the use of analytical procedures than prior guidance, it is nevertheless apparent that there are certain issues regarding standard setting and implementation that remain. Based on the research reviewed above and on the observations of experienced auditors, we have identified some of these issues. The issues are presented in three parts: (1) the *usage* of analytical procedures, (2) the *effectiveness* of analytical procedures, and (3) auditors' *expertise* in using analytical procedures. The first part addresses the nature and extent of usage for those procedures actually used in practice. The second part deals with the effectiveness of the procedures (apart from that of the user), and the third part deals with the effectiveness of the user of the procedures (apart from the effectiveness of the procedure).

When considering the usage of analytical procedures, two types of issues emerge. The first relates to the wording of two paragraphs of SAS No. 56, which requires clarification. The second refers to specific aspects of the use of analytical procedures where guidance is needed, but that are not addressed in SAS No. 56.

First, we look at paragraph 5, which contains the definition of analytical procedures:

> Analytical procedures involve comparisons of recorded amounts, or ratios developed from recorded amounts, to expectations developed by the auditor. The auditor develops such expectations by identifying and using plausible relationships that are reasonably expected to exist based on the auditor's understanding of the client and of the industry in which the client operates. . . .

Although this statement is useful, and identifies "developing expectations" as a critical element of using analytical procedures, we think the definition of analytical procedures should be clarified to put even stronger emphasis on the role of expectation formation. Our view is that using analytical procedures is a three-step process, involving *estimation*, *comparison*, and *judgment*. The first step is to estimate the account balance or item by developing the necessary causal links (as the SAS states) ". . . identifying and using plausible relationships that are reasonably expected. . . ." The estimation is derived from one of the three types of procedures noted above: trend analysis, ratio analysis, or modeling-type procedure. The second step is to compare the estimated amount with the recorded amount, and the final step is to judge whether the recorded amount is reasonable and

to determine any follow-up that might be necessary. The nature of follow-up depends on the audit phase; for example, in the planning phase, the results are used to "enhance the auditor's understanding of the client's business. . ." and to direct attention to potential risk areas.

Our view is that the estimation step is often given insufficient attention, that there is a tendency to jump to the comparison step and compare two ratios, to compare a balance to the prior year or budget, etc., without developing the causal relationships that are necessary for an effective application. We think it is important to view explicitly the use of the analytical procedure as an application of an estimation model or approach for it to be most effective. To focus on the estimation step assures that the auditor will be aware of the importance of assumptions implicit in the estimation (e.g., is the prior year's balance still relevant for a comparison?), and will focus the auditor's attention on the means that may be available to make that estimation more accurate, that is, to focus on the effectiveness issues developed in paragraphs 12 through 17 of SAS No. 56. For example, while many auditors would view a trend analysis of the working trial balance accounts and a comparison of current and prior-year balances as a useful analytical procedure, we expect few would argue that the prior-year's balance, by itself, is a useful estimate of the current balance.

For these reasons we argue that paragraph 5 should be reworded to emphasize the role of estimation in analytical procedures. Suggested wording might look something like the following:

> Analytical procedures are audit procedures used in planning, overall review, and as a complement to other substantive tests, based upon the analysis of interrelationships among a client's financial and operating data, industry data, and other relevant external data. An analytical procedure requires three steps:
>
> (1) Develop an estimation for the account balance or item under examination, based upon a study of the interrelationships among client financial and operating data, relevant industry data, and other general economic data.
>
> (2) Determine the difference obtained by comparing the estimated amount to the amount under audit. The amount of the difference is a direct measure of the chance of an unexpected variation as described in paragraph 2 (which can reflect unusual transactions or events, business changes, random fluctuations, or misstatement).
>
> (3) Determine, based upon the amount of the difference and an assessment of the precision of the estimation, the necessary audit steps that should follow, which will depend on the phase of the audit at which the procedures are employed. For example, at the planning stage, the follow-up will be to design the audit plan to reflect the risk areas identified by the procedures.

Kinney and Haynes (1990) identify an issue regarding the wording of paragraph 21. Kinney and Haynes argue, and we concur, that the paragraph requires clarification, because the present wording can be interpreted in a way that would increase the risk of incorrect acceptance.

> 21. The auditor should evaluate significant unexpected differences. Reconsidering the methods and factors used in developing the expectation and inquiry of management may assist the auditor in this regard. Management responses, however, should ordinarily be corroborated with other evidential matter. In those cases when an explanation for the difference cannot be obtained, the auditor should obtain sufficient evidence about the assertion by performing other audit procedures to satisfy himself as to whether the difference is a likely misstatement. . . .

This wording tends to suggest that, when a significant unexpected difference is observed, the auditor should first consider nonerror causes, such as how the procedure might be deficient, rather than to first consider what might be the possible error cause. As Kinney and Haynes state:

> The suggestion is to change the focus on SAS #56 paragraph 21 from a search for nonerror causes to a consideration of error causes. That is, the suggestion is similar to the "conceptually logical approach" of SAP #54 (para. 65) to "consider the types of errors and irregularities that could occur" and then to consider which controls would prevent them. For analytical procedures, the approach would be to consider possible errors and then look for data that would be consistent with the misstatement.

A second set of issues regarding the usage of analytical procedures arose from our discussion of implementation issues with auditors from large CPA firms. It became clear that at least for some of these firms, the firm's internal guidance goes well beyond SAS No. 56 in specificity. For example, the internal guidance addresses such issues as (1) when analytical procedures are appropriate, (2) what are the types of analytical procedures, including examples and related assumptions, (3) how precision is measured and related to materiality and audit scope, (4) what to do if the procedure's precision is greater than materiality, (5) the required documentation, (6) the nature of sufficient corroborative information from management, and (7) how to select and use computer-based decision aids and other technology to facilitate analytical procedures.

The existence of this internal guidance is evidence that it is valuable. The additional guidance is consistent with the SAS and helpful to the individual auditor in complying with the SAS. However, it is likely to be generally true that the smaller CPA firms will not have the resources to develop and maintain the internal guidance, so a broad issue for standard setting is whether

or not the SAS should be delivered at a sufficiently detailed level to assist the smaller CPA firms. A response to this issue is that the specific guidance outside of the SAS (primarily textbooks and professional books) is sufficient. Our thinking is that the level of detail in the present guidance is about right, given the availability of textbooks and professional books on the subject. One exception is that, when analytical procedures are used as substantive tests, the issue of the relationship between materiality and the precision of the procedure should be addressed explicitly in the SAS. The statement in paragraph 20 is too vague, and should be amended to say that when the precision of the procedure exceeds materiality, and cannot be improved by aggregation with other tests, the procedure cannot be used to reduce other substantive tests. Kinney and Haynes (1990) present a useful discussion of this issue.

We now consider implementation issues related to the research findings on the effectiveness of analytical procedures. We refer specifically to the use of analytical procedures as a substantive test, which is wherein the issue of effectiveness primarily arises. Several of the auditors who discussed these issues with us noted that SAS No. 56 might cause some undue reliance on analytical procedures with the effect that other important audit procedures that should be done are not being done. The auditors were in effect reluctant to place too much emphasis on analytical procedures as a substantive test. This view is validated by the results of the studies by Blocher, Esposito, and Willingham (1983), Biggs, Mock, and Watkins (1989), and Cohen and Kida (1989) that showed that auditors do not tend to reduce the level of detail testing, even if the findings of the analytical procedure are favorable. Part of the problem is that analytical procedures provide a *lesser type* of assurance than detail test procedures. As Blocher and Willingham (1988) state:

> To evaluate the strength of the evidence from analytical review, we must consider that analytical review provides a negative-type assurance rather than a positive one. That is, though analytical review can be a useful technique for detecting a material misstatement, it cannot be relied upon to confirm with positive assurance that a misstatement is not present. Positive assurance comes only from the proper application of the appropriate detail test procedures. Thus, the auditor can never rely exclusively on analytical procedures when risk or materiality is high.

Also, Kinney and Haynes (1990) observe:

> Even though SAP #54, SAS #23 and SAS #56 did not indicate that analytical evidence was in any way inferior to tests of details, there was such indication from practitioners. Ernst and Whinney placed restrictions on the reliance that can be placed on analytical procedures (Grobstein and Craig, 1984, 14)...The Tenth Edition of

Montgomery's Auditing stated that, relative to analytical procedures, tests of details are less efficient, but tests of details "commonly provide a higher level of assurance with respect to an audit objective." (Deflise, 1975, 340).

From the above, it appears that auditors take the view that analytical procedures provide a limited, negative type of assurance, and their use as a substantive test is therefore limited. Our view is that the expected effectiveness of the analytical procedures depends on the *assertion* being examined and the *design* of the procedure. Regarding the impact of the assertion, analytical tests may be somewhat more effective than other substantive procedures for tests of *completeness* and tests of *reasonableness of reserves*, where the positive confirmation of detail test procedures has little or no value. In contrast, for the assertion of *existence or ownership*, perhaps detail test procedures will be more effective. This issue is addressed in SAS No. 56 in a very general sense, and more specific guidance on this point would be helpful.

Regarding the impact of design, it can be said that, "Nothing in auditing is free." That is, while the common perception is that analytical procedures are a simple and inexpensive way to obtain audit evidence, we find that very little evidence is provided if the procedures are very simple. In contrast, if the more complex and expensive types of analytical procedures are used (e.g., regression analysis with monthly data, wherein the input monthly data are tested for reliability), the evidence value of the procedures goes up dramatically. Perhaps our thought here could be expressed in the equivalent positive form, "You get what you pay for." In analytical procedures, this means if you use more complex procedures, more accurate input data, more detailed input data, and a more complete model, your precision and, therefore, your evidence value will be high. This leads us to argue that the usage and effectiveness of analytical procedures might be improved if they were not viewed as relatively inexpensive procedures, but rather, as an alternative to detail test procedures. Perhaps the choice between detail test procedures and analytical procedures would best be made based on the nature of the account or assertion being tested rather than, or in addition to, how costly or simple the procedure is.

We now consider the implications of research in auditor expertise. There are two broad guidance issues that arise from the research—one relating to the attenuation of the decision biases observed in auditors and the other to the development of causal modeling skills.

Dealing With Decision Biases

The research has shown consistent evidence that auditors, like other decision-makers, display certain decision biases—

- Inaccurate and biased subjective time-series estimations (Blocher 1985; Biggs and Wild 1985; Kaplan 1988; Heintz and White 1989)
- Availability bias; auditors perceive likelihood of error as influenced by perceived and actual error frequency (Libby 1985)
- Anchoring and adjustment (Kinney and Uecker 1982; Biggs and Wild 1985; Heintz and White 1989)
- Inadequate hypothesis generation (Heiman 1990; Bedard and Biggs 1991)

Guidance to overcome or attenuate these biases would appear to be appropriate. Professional guidance could take the form of an instruction about the bias, including an illustration of how the bias occurs. The idea here is that awareness of the bias is perhaps the most effective and efficient means of improvement. Thus, decision makers can be cautioned to avoid certain decision biases much as in the nutrition area, where we have been sensitized to the dangers of too much fat and salt in the diet.

A second approach to guidance might be to integrate decision support within an audit practice, in the form of checklists or similar structured decision aids, or in the form of computer-based decision support tools. For example, the use of forecasting software could be an effective way to deal with the biases in subjective estimation.

Finally, the decision biases can be addressed through training and education, wherein the individual auditor practices proper decision-making techniques, and thereby learns to reduce the effect of these biases.

Developing Causal Modeling Skills

Our view is that the ability to develop a causal model of the financial and other data relationships for an account is crucial to the effective utilization of analytical procedures. As Kinney and Haynes (1990) state, "Given an unexpected difference, the auditor would consider what error cause might explain it. Then the auditor would consider what other readily available data would be consistent with the error and determine whether the other data is consistent." Also, Blocher, Bouwman, and Davis (1992) show from a review of the research in learning that both a causal model and clear, accurate outcome feedback are necessary for the development of expertise through "learning from experience." Moreover, the Accounting Education Change Commission, as well as many of the Big Six firms individually and together have spoken for the need to develop analytical skills, problem identification skills, and problem-solving skills in the entrants to the profession. We see these analytical skills and causal modeling skills as closely related. And the skills are particularly important in performing analytical procedures effectively.

The development of causal modeling skills is difficult. To begin, we do not have good measures of these skills. Thus, it is difficult to identify instances of good or poor application of the skills, and similarly, it is difficult to measure improvement. We suggest that accounting educators and researchers investigate the means by which these skills are measured and the means by which they are learned. As a starting point, we might consider the measure of field independence (Witkin, Oltman, Tashkin, and Karp 1971), which has been used to measure analytical ability. Also, we might consider texts such as *The Complete Problem Solver* by John R. Hayes (1989), to aid in developing causal modeling skills.

Recommendations for Research

We are encouraged by the success of prior research in influencing the state of standard setting (Loebbecke 1987), and we expect this trend to continue. Therefore, in view of what the prior research has and has not accomplished and with a look to the observed implementation issues regarding SAS No. 56, we find there are some areas wherein research would be particularly useful.

First, as noted by Loebbecke (1987), Johnson, Jamal, and Berryman (1989), and others, there is a need for research to develop a comprehensive theory for analytical procedures. A theoretical framework is important in that it facilitates orderly research in the area, by focusing research questions on relevant areas and aiding in the interpretation of the results of the research. A theoretical framework would assist researchers and auditors in understanding and acting on some of the implementation issues noted above, for example:

1. What type and level of assurance does an analytical procedure provide? How does this differ from that of other audit procedures, particularly detail test procedures?
2. What are the steps in performing an analytical procedure, and how does the auditor assess the value, or precision, of a procedure?
3. In investigating unexpected differences, what attention does the auditor give to error causes and nonerror causes?
4. How does the auditor develop expertise in analytical procedures? What is the role of outcome feedback in this regard? How does an auditor develop analytical skills, the ability to employ a causal modeling approach for analytical procedures?

Second, as noted by Kinney and Haynes (1990) and others, research should continue to focus on the question of how effective analytical procedures are in various contexts, for example, fraud detection. We learned a

good bit from recent research in this regard, but we have far from a full understanding of the effectiveness of analytical procedures. A related research issue is to develop a better understanding of how precision is measured for the different types of analytical procedures. A benefit of regression analysis is that it develops its own measure of precision, the standard error of the estimate. But, the other procedures do not provide a direct quantitative measure of precision. The auditor would benefit from research that would provide guidance in knowing how to determine a quantitative measure of the precision of a procedure, and how this precision measure is used in determining the nature and extent of further audit tests.

Third, we see as an important broad area for research the investigation of the nature of auditor expertise in analytical procedures. What is the nature of this expertise, and how is it acquired? An important aspect of this research will be to determine the nature of auditors' knowledge structures (memory, perception, etc.), the role of outcome feedback, and the development of causal models by the individual auditor. Also, the work will need to look at the results of prior research on decision biases in analytical procedures, which have by now established a fairly predictable pattern of auditor decision response, and follow up this work with studies directed at finding effective ways to ameliorate these biases in practical decision settings. A related research question is the role and effectiveness of decision support techniques such as expert systems in facilitating decision performance or in facilitating the learning process.

Fourth, although prior studies have investigated the use of analytical procedures by auditors, there is now a need for study of the use of the procedures by internal auditors and controllers. Controllers and, to a lesser extent, internal auditors are regular users of financial statement analysis for the purpose of understanding and explaining changes in financial performance to upper management. Also, internal auditors use analytical procedures to identify risk areas. We need to know more about the usage and effectiveness of the procedures used by these other professionals, and how the results of these procedures might be integrated into audit planning, and perhaps used as a substantive test.

Finally, we see a need for education research aimed at developing better pedagogy to help students acquire analytical skills—how to develop causal models of the relationships affecting an account or item.

Appendix

Summary of Major Research Findings

Questions Addressed	*Major Findings*

Descriptive Studies

Analytical Review in General

Questions Addressed	*Major Findings*
Neumann (1974)	
What sources of information are available to auditors in doing analytical procedures?	The sources include corporate directories, product directories, investors' services, industry/business index services, industry statistics services, and geographical statistics.
Felix and Kinney (1982)	
What areas of analytical review have researchers addressed?	Research relating to the auditor's opinion formulation process can be classified by steps of the audit process: orientation, forming prior probability functions and planning; systems evaluation and testing; substantive testing; and evidence aggregation and opinion formulation. Within each step, it can be further classified as state description research, model/theory development, or hypothesis testing. Analytical procedures-related research (through 1982) can be found in the first three steps in the form of state description research, and in substantive testing in the form of model/theory development. The greatest concentration is in this last category and relates to the use of structured/statistical techniques.
Smith (1983)	
What guidance is appropriate for practitioners as to the nature, extent, and timing of analytical procedures?	All practitioners surveyed perform certain procedures that fall into the definition of analytical procedures; however, there is wide diversity in the amount of reliance placed on analytical procedures. The practitioners allocate 5 to 15 percent of total audit time to these activities. Most practitioners find it difficult to determine what constitutes a significant fluctuation or variation.

Questions Addressed	*Major Findings*
	Use of analytical procedures is a twelve-step process: *Designing the procedures* 1. Define the accounting amount or relationship to be reviewed. 2. Define the objectives of the review procedures. 3. Determine the examination methods to be used. 4. Define a significant fluctuation in the amount or relationship being investigated. 5. Specify the reliance desired from the analytical review procedures. *Comparison of amounts or relationships identified for review* 6. Decide between computer or noncomputer comparison of data. 7. Control the nonsampling risk. 8. Ensure audit control. 9. Make the comparison. *Examination of significant fluctuations* 10. Identify significant fluctuations. 11. Investigate significant fluctuations. *Evaluation of the results* 12. Form the conclusion.
Akresh, Loebbecke, and Scott (1988); Loebbecke (1987) What areas of analytical procedures have researchers addressed, and when compared to a framework for research in analytical procedures, what are the gaps in the research?	As reported in Akresh, Loebbecke, and Scott, the Loebbecke paper reviewed fifty-three books and articles on analytical procedures, with the following findings: • Analytical procedures are important to auditing. • Analytical procedures are used extensively, but inconsistently. • Analytical procedures vary in effectiveness. • SAS No. 56 appears to be consistent with, and to have benefited from extant research. His recommendations included: • There is a need for a theory of analytical procedures. • There is a need for research on specific industries, since the existing research on

(continued)

Questions Addressed	*Major Findings*
	commercial and manufacturing companies cannot be generalized to others. • There is a need for research to identify the relationship between analytical procedures and specific audit objectives.
Callahan, Jaenicke, and Neebes (1988) What are the objectives of SAS No. 56?	The authors explain the role of analytical procedures in the three phases of the audit (planning, substantive test, and review), how to document the procedures, and some illustrative applications.
Coglitore and Berryman (1988) How effective are analytical procedures at detecting management fraud?	A review of court decisions and U.S. Securities and Exchange Commission actions is used to demonstrate that simple analytical procedures could have detected the massive fraud in selected well-known fraud cases. The authors argue that analytical procedures should be used far more extensively for the detection of management fraud.
Whittington (1990) How and when can analytical procedures be relied on as substantive?	The paper provides guidance and a few illustrative cases to demonstrate the use of analytical procedures to reduce other substantive tests. The illustrations show the effect of the use of analytical procedures on the sample sizes used in tests of details.
Blocher (1988) How can the microcomputer be used to facilitate analytical procedures?	The paper shows how to use audit software, database systems such as dBASE III, and spreadsheet systems for more efficient and effective analytical procedures.
Kinney and Haynes (1990) Are analytical procedures subject to certain inherent biases that may affect the competency of evidence?	This paper looks at the competency of evidence arising from analytical procedures in comparison to evidence from tests of details. The paper concludes with a set of recommendations for both researchers and standard setters to deal with this problem.

Questions Addressed	Major Findings
	For Researchers: 1. What is the essential mathematical nature of analytical procedures? 2. How reliable are analytical procedures used in practice? 3. To what extent do behavioral biases affect results of analytical procedures? *For Standard Setters:* 1. Change paragraph 21 from a focus on nonerror causes to a focus on error causes. 2. The auditor should take a causal approach in investigating significant differences. 3. Auditing standards should be designed to reduce behavioral biases.
Reneau (1991) When employing audit procedures, should the auditor use confirming, disconfirming, or random evidence selection strategies? What is the implication of this result for the use of analytical procedures?	Using a model for the design of hypothesis tests that was developed in the psychological literature, this paper shows that a "confirming" type of evidence selection strategy is most effective in many realistic audit settings. This result is used to support the desirability of using analytical procedures, on the basis that the above demonstration shows a favorable baseline performance for even the least effective analytical procedures.
Analytical Procedures—Various	
Kinney and Felix (1980) What analytical procedures methods might be used, and what would be their extent and timing?	Analytical procedures can be classified into four groups, each having relative advantages and disadvantages with respect to effectiveness and cost. The groups are: (1) subjective evaluation by experts, (2) rules of thumb, (3) time trend extrapolation, and (4) structural (regression) models.
Hylas and Ashton (1982) What are the causes of errors in financial statements and the auditor's means of detecting them?	Analytical procedures signal a large proportion of material errors (in this empirical study, 27.1 percent).

(continued)

Questions Addressed	*Major Findings*
Arrington, Hillison, and Icerman (1983)	
What are the results of current research on the use of analytical procedures models in auditing?	Research regarding limited trend, regression, and time series models was reviewed and analyzed. The conclusions of the authors reviewed are found valid. In addition, the authors conclude: • Limited trend models may be effective where data availability is limited; however, where data is available, more rigorous models should be considered. • Regression is generally more effective than limited trend, and auditors have the ability to select appropriate predictor variables. • Regression appears most appropriate for revenues and expenses. • Use of time series models may be limited in terms of current application by auditors.
Wallace (1983)	
What is the nature of potential analytical procedures?	Analytical procedures vary in effectiveness along a continuum from "soft" to "hard." A taxonomy demonstrating this is presented. Most analytical procedures used in practice are soft, and not very effective. The potential for greater and more effective use of analytical procedures is, therefore, very great. Analytical procedures may be effective in situations where detailed tests are not effective, particularly with respect to discovering fraud. Reported field experience on five clients of one firm indicates that regression analysis is an effective analytical procedure that can be implemented in practice.
Wright and Ashton (1989)	
How effective are three procedures—client inquiry, expectations based on prior years, and analytical procedures—in signaling material errors?	The study is a follow-up of the Hylas and Ashton study (1982). Based on a study of 186 audit engagements of a single Big Six firm, this study found evidence confirming the results of previous studies, that the three procedures signaled about half the material errors detected in these engagements.

Questions Addressed	*Major Findings*
Analytical Procedures—Specific	
Stringer (1975)	
How well has regression analysis worked in Deloitte, Haskins & Sells' audit practice?	Both time-series and cross-sectional applications have been found. There were over 10,000 applications in 1974.
	Independent variables ordinarily consist of data from the company's accounting records or other internal sources, or from external sources such as industry statistics and general economic indicators; sometimes they may include an indicator of time and dummy variables to indicate the presence or absence of conditions that cannot be further quantified.
	Independent variables should be plausible and have audit significance.
	Ordinarily, a base period of three years is used in time-series analysis.
	The cut-off point for identifying excesses should be a function of materiality, reliability levels, the standard error of prediction, and the most adverse distribution of a material amount of error that could occur in the dependent variable data. The amounts of excesses should determine the extent of additional tests of details.
	Coefficients of correlation have been very high and discriminatory power has been good.
	General acceptance has been good, but most favorably by young, quantitatively oriented staff. The advantages of regression analysis include: focus on an overview and insight into the business operation; increased objectivity and discipline concerning the reliance assigned to analytical procedures; related reduction in tests of details; and the feasibility of tests for understatements in areas where tests of details for this purpose are difficult to design and apply.
Chen and Shimerda (1981)	
How can financial ratios be categorized to resolve the problem of ratio selection?	A seven-factor categorization scheme captures the information content of the financial ratios used in previous studies.

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Questions Addressed	*Major Findings*
	The categories are return on investment, capital turnover, financial leverage, short-term liquidity, position, inventory turnover, and receivables turnover.
Bao, Lewis, Lin, and Manegold (1983)	
What research has been done to investigate the use of time-series techniques (particularly time series models) in accounting?	There are a number of possible difficulties in applying such techniques (e.g., the availability of data and technical problems). Only one paper (Kinney on time series models) applies directly to analytical review and auditing.
Use of Analytical Procedures in Practice	
Biggs and Wild (1984)	
What is the auditor's experience with analytical procedures?	A high percentage of auditors used judgmental procedures such as scanning and ratio analysis in analytical procedures. The more quantitative procedures such as regression and time series tended to be used by less experienced auditors. The findings indicate the significant ability of analytical procedures in detecting financial statement errors.
Daroca and Holder (1985)	
What is the nature and extent of use of analytical procedures in practice?	There are no significant differences in the use of analytical procedures in audits versus reviews. The most frequently applied analytical procedures are: • Working capital • Current ratio • Gross margin on sales • Profit margin on sales • Comparison of current with previous financial statements and their relationships with overall totals Practitioners tend to apply those analytical procedures not requiring an extensive knowledge of mathematical or statistical techniques, and analytical procedures that utilize only data contained within the basic financial statements.

Questions Addressed	*Major Findings*
Tabor and Willis (1985)	
What analytical procedures are used on actual audits?	(Based on a limited sample.) The use of analytical procedures, in planning, substantive testing, and final review, increased significantly from 1978 to 1982, and should be expected to continue to increase in the future. The amount of use of analytical procedures varied significantly from audit to audit in the planning and final review areas, and was more consistent for substantive testing. There was very little use of advanced quantitative procedures. Nonquantitative procedures were used more than simple quantitative procedures in planning and final review, with the reverse being true for substantive testing. From 1978 to 1982, however, a shift from nonquantitative to simple quantitative procedures has occurred.

Methods Studies

Various Methods

Albrecht and McKeown (1976)	
What are some arguments in favor of developing more extended use of statistical analytical procedures, and how do several different statistical techniques compare?	The methods considered were trend analysis, ratio analysis, regression analysis, and Box-Jenkins (B-J) time-series analysis. It was concluded that all of the techniques can be theoretically subsumed under the comprehensive bivariate B-J methods, except for regression where the dependent variable is a function of more than one exogenous independent variable. It appears that both regression and bivariate B-J are appropriate techniques that can be used in performing statistical analytical reviews. The advantage of using these is a more objective basis on which to render an audit opinion and also increased audit productivity.
Kinney (1979)	
What is (1) the distributional nature of auditor-initiated	Based on a sample of forty-four small firms, the basic inventory/cost of sales cycle,

(continued)

Questions Addressed	*Major Findings*
adjustments, and (2) the predictive ability of widely applicable analytical procedures that use limited and readily available information?	general and administrative expense, and the income tax-related accounts are the most adjustment prone; analytical procedures are likely to be useful for the first two categories. The simple methods tested appear to be fairly effective in predicting errors, when information about prior year's adjustments is included.
Coakley (1982)	
What is the relative effectiveness and efficiency of the analytical procedures in use by practicing auditors?	Practicing auditors use ratio and trend techniques most frequently in practice. In fact, the auditors surveyed did not use structural models. The basis for their decision rules is either absolute differences over time or differences relative to materiality. Analytical procedures should address the majority of errors that practicing auditors expect to find that would be material. The analytical procedures tested were more sensitive to error distribution than to error amount. The predictive ability of regression-based techniques was higher than that of the other techniques. However, most techniques do not adequately capture the economic patterns in the financial data of the test firms, leading to poor performance given the precision intervals commonly used. Analytical procedures (as tested) should be used primarily for attention-directing purposes, and should not be entirely relied on for substantive testing purposes.
Knechel (1986)	
How effective are various analytical procedures using simulated data?	Regression approaches tended to have fewer type I and type II errors than other (nonstatistical) analytical procedures. All models are affected by error size—they are more effective at detecting large nonrecurring errors rather than small recurring errors.

Questions Addressed	Major Findings
Loebbecke and Steinbart (1987)	
Do preliminary analytical procedures provide substantive evidence, and serve as a basis for reducing the extent of other, more detailed substantive tests?	Preliminary analytical procedures probably do not provide a reliable and effective basis for reducing the extent of other, more detailed substantive tests in most cases, and should not be used for that purpose.
Kinney (1987)	
What is the attention-directing effectiveness of analytical procedures using selected ratios with three decision rules: (1) traditional percentage change rule, (2) a statistical, standardized change rule, and (3) a pattern analysis of cross-sectional changes in several ratios?	The relative size of errors is very important. Even an error that is material to the year-end financial statements does not lead to a large change relative to the natural variation in many balances and ratios. The joint consideration of deviations in several ratios (patterns) can be useful in identifying a particular type of error that might exist. In developing ratios containing balance sheet accounts, use of ending balances (versus averages for the year) is desirable from an audit perspective because it isolates potential errors in ending balances from variation in beginning balances.
Knechel (1988)	
What is the effect of various analytical procedures approaches on overall audit effectiveness (i.e., sample size and achieved audit risk) using simulated data?	Regression-based procedures using monthly data had the smallest sample sizes of those tested. Most models that used monthly data resulted in achieved risk that was less than desired risk. Many analytical procedures may be effective, but some are more efficient than others.
Bell, Ribar, and Verchio (1990)	
How useful are logistic regression and neural network computing in predicting the failure of commercial banks over a twelve-month time horizon.	The results show that the two models give comparable prediction performance.
Coakley and Brown (1991)	
What is the relative effectiveness of analytic procedures using neural	This is a simulation study derived using data from one company over a four-year period, seeded and unseeded with error distributions.

(continued)

Questions Addressed	*Major Findings*
network computing to identify unusual fluctuations versus conventional ratio and regression methods.	The study reaches a tentative conclusion that the neural network recognizes patterns across financial ratios more effectively than either ratio or regression methods.
Ratio Analysis	
Gupta and Huefner (1972)	
Is there correspondence between broad industry-group financial ratios and underlying characteristics of the industry groups?	There is high correspondence of financial ratios with both the judgmental classifications of economists and with numerous qualitatively expressed economic characteristics of the industries involved. The greater the specialization of the assets involved in the ratio, the clearer the correspondence. Since the characteristics are difficult to obtain, relevant ratios may be used as surrogates for them.
Trapnell (1977)	
Is there information content in financial ratios relative to the identification of industry membership?	The stratification of firms by industry does not necessarily result in groupings of firms whose financial ratios are significantly different from all other industries. The ratios that are significant in differentiating industries are generally balance sheet ratios, particularly relating to current assets, total assets, and asset turnover.
Deakin (1979)	
Is there normality in the distributions of eleven commonly used financial ratios (using data from 1955 to 1972)?	Assumptions of normality for financial accounting ratios would not be tenable except in the case of Total Debt/Total Assets, and then the assumption would not hold for the most recent data observations. It does appear that normality can be achieved in certain cases by transforming the data. Financial accounting ratios might be more normally distributed within a specific industry group.

Questions Addressed	Major Findings
Frecka and Hopwood (1983)	
What are the effects of outliers on the cross-sectional properties of the distributions of financial ratios?	By deleting outliers, normality or approximate normality usually can be achieved for manufacturing firms and specific industry groupings. In addition, there is a general reduction in relative variances.
Knechel (1988)	
How effective are simple trend and ratio procedures in reducing sample sizes for subsequent detail tests and in reducing overall detection risk when used alone and together with dollar unit sampling (DUS) techniques?	The major findings are: • The trend and ratio procedures combined with the DUS strategy can increase audit effectiveness relative to an audit approach that does not use analytical procedures. • Using monthly account information in analytical review is more effective than using annual balances alone, as long as the accounting system is minimally reliable. • The trend and ratio procedures alone are not effective in detecting material errors.
Wilson and Colbert (1989)	
How effective are simple trend models, regression models with simple investigation rules, and regression models with statistical decision rules in detecting material errors?	Using data from an actual audit engagement, and seeding different error patterns, the authors found that all the models were effective in detecting the seeded error, but that the regression model with a statistical decision rule provided the most accurate predictions and fewest incorrect rejections.
Wheeler and Pany (1990)	
How effective are simple naive models, regression models, and time-series models in detecting material errors?	Using a simulation method, quarterly data, and introducing different error types, the authors found that the time-series model and the regression model outperformed the naive models, as consistent with prior studies.
Regression Analysis	
Deakin and Granoff (1973); Kinney and Bailey (1976)	
How can regression analysis, coupled with Bayesian statistical procedures, be used to provide the auditor with assistance in selecting those accounts for investigation that	Demonstration was provided.

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Questions Addressed	*Major Findings*
are most likely to result in significant audit findings?	
Kinney (1977)	
What is the conceptual basis for integrating the results of auditor's analytical procedures using time-series-based regression and tests of details using a "partitioned" DUS plan?	When looking at monthly data, the presence of a material error in a single month is relatively easy to detect with analytical procedures while an equal or proportionate distribution may be virtually impossible to detect using analytical procedures alone. An approach for combining regression-based analytical procedures and DUS-based tests of details for an income statement account is developed analytically and then validated with a limited simulation.
Elliott (1978)	
Why is regression analysis not commonly used in auditing?	There are three general considerations as to why regression analysis is not commonly used in audits: *High costs* Training must be extensive. Model building requires a great deal of time. Data acquisition is generally costly. *Low benefits* Regression models typically have low resolving power compared with audit precision requirements. *Technical validity* There are a number of technical concerns that must be dealt with when regression analysis is used.
Kinney and Salamon (1978)	
What are the effects of errors in the independent and dependent variables on the application of regression in auditing?	Random measurement error in the independent variable does lead to increased type I and type II errors, while uncorrected accounting errors in the base period leads to reduced type I errors but increased type II errors. The latter effect is particularly pronounced when there are several small uncorrected errors.
Neter (1980)	
How does regression perform in practice, using two case	In neither of the two cases did the auditor appear to have particularly difficult problems

Questions Addressed	Major Findings
studies that explore statistical issues—one on assessing the reasonableness of accounts receivable using time-series analysis, and one on selecting locations to visit using cross-sectional analysis?	in identifying potential independent variables. In both cases, variables not included in the financial statements were found to be useful for explanatory purposes. The fitting of the regression models and examining them for aptness presented no major difficulties in either case. The predictive ability of the regression models for the cross-section case tended to be better than for the accounts receivable models.
Akresh and Wallace (1980)	
How does regression perform in practice in limited review and audit planning, including technical validity, effectiveness, and costs?	Regression analysis proved to be a useful tool for time-series analysis of the revenue-related accounts of a public utility. Major advantages over nonstatistical techniques were added discipline, magnitude as well as direction of error, and long-term perspective. Thirty-six-month models performed well, although were improved upon by an eighty-four-month model in some cases. Stepwise analysis can be supported as an aid in model building in the initial year, but the auditor should specify a logical model after that point. The major cost was training. Cost savings in other procedures, however, result in an overall 5 percent decline in audit hours (drops in sample size approaching 60 percent can be anticipated). The use of regression requires active partner and manager participation.
Collins (1980)	
What is the impact of model specification errors on the effectiveness of stepwise regression analysis in auditing?	Model specification error does occur when using the stepwise regression method. The specification error results in biased estimates of the model parameters and inefficient predictions of account balances. The auditor's investigation rule can be framed so as to offset the riskiness of these effects.
Kinney and Salamon (1982)	
What is the relative effectiveness and efficiency of the "Stringer" (DH&S)	The DH&S model performed quite well, is just as effective as the Kinney model (both controlled type II errors at or below the

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Questions Addressed	*Major Findings*
investigation rule (monthly expected value to monthly materiality construct) to the "Kinney" investigation rule (annual expected value to annual materiality construct with a monthly "filter") in the application of regression analysis in auditing using simulation?	nominal level), and more efficient (i.e., fewer type I errors).
Wilson and Glezen (1989)	
What would be the difference, if any, of using the Kinney and Salamon (1982) regression-based decision rules on actual client data, in contrast to the simulated data used in the prior study?	Using the three regression models examined in the prior study, and using similar error seedings, the authors replicated the prior study on actual client data. The findings supported the relative effectiveness of the rules as shown in the prior study, although there were some differences in the number of type I and type II errors and number of months investigated, due to the greater variability of the actual data.
Other Methods	
Kaplan (1978)	
How feasible is it and what judgments are required to build a financial planning model that will produce pro forma statements of sufficient accuracy that they can be used by auditors for their analytic reviews and perhaps to reduce reliance on other audit tests?	A model that used sales as an exogenous variable was constructed (based on monthly data) that appears promising for income statement accounts. The model was not sufficiently accurate for the balance sheet.
Kinney (1978)	
What is the relative performance of four statistical and two naive procedures for conducting analytical reviews that rely on substantially different data sets (specifically, ordinary least squares regression, and three sets of time series-	All methods exhibit a slight prediction bias, but the time series-based univariate transfer function, which requires the largest information set and the greatest computation effort, yields the smallest mean absolute error as well as the smallest prediction bias. Regression predictions are second in predictive power. Both performed

Questions Addressed	*Major Findings*
based predictions are compared with martingale and submartingale predictions for a set of monthly accounting series)?	substantially better than the naive methods. Time series can be used to estimate an independent variable value for use with regression, when such values are not available on a timely basis. Time series models seem to be potentially useful, but not as generally applicable alternative(s) to the more traditional time-series regression.
Lev (1980)	
How well do index-based prediction models work for analytical review?	Index models can be useful to auditors in generating predictions in analytical review. Models that incorporate both industry- and economy-wide data can be used.
Kinney (1981)	
What is the effectiveness of specific analytical procedures that use information of a group of similar companies as a basis for comparison to unaudited information in the subject company (bivariate method)?	The bivariate method of using paired values from industry data as a basis for comparison in analytical procedures holds promise as a potentially effective method.
Howell, Frazier, and Stephenson (1982)	
What is the effectiveness of using industry data for comparisons in evaluating small firms?	Aggregate industry measures of central tendency may be highly misleading when used as standards of comparison. A high degree of similarity among the firms making up the industry aggregate data (including the subject firm) is indispensable. In industries where significant variations in marketing strategy exist, the chances of aggregate industry data being misleading is high.
Willingham and Wright (1984)	
What types of errors are found in audits of manufacturing firms' accounts receivable and inventory, and to what degree can those errors be estimated given knowledge of general	A moderate degree of explanation of errors in accounts receivable and inventory can be achieved given information on the magnitude of the error (if any) in the previous period and information on a few other basic characteristics of the company, in particular,

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Questions Addressed	*Major Findings*
and account-specific company characteristics?	the quality of the entity's accounting staff and measures of aspects of the quality of management.
Wild (1987)	
How effective are structural models in generating predictions for analytical procedures?	Using actual data for a large manufacturing company, the paper develops and tests a twenty-two-equation structural model that utilizes the interpendencies among financial statement accounts. Comparisons are made to univariate time series models. The author concludes that the results support the development of structural models for analytical review. The results are, however, not supportive for the aggregate accounts (gross margin, expenses, income). Also, because the degree of misspecification and parameter estimation errors can be significant in certain applications, the usefulness of the structural model should be assessed in each application.
Wilson, Glezen, and Cronan (1988)	
Since prior research has shown that the Optimal Linear Correction (OLC) factor can improve the precision of time series models, will analytical procedures using time series models on components of net income (sales, cost of sales, expenses) be improved by the inclusion of the OLC factor?	Using actual data, time series models (with and without OLC) were developed for eighteen data series, with the result that OLC provided little improvement in the models. The authors conclude that, while time series methods are potentially useful for analytical review, the OLC factor is not necessarily helpful.
Harper, Strawser, and Tang (1990)	
Can investigation thresholds used with analytical procedures be established using bivariate statistical distributions, and if so, will these investigation thresholds improve the effectiveness of the procedures?	The authors develop a bivariate normal distribution model (using the balance predicted by analytical procedures and the balance determined by detail tests) to model the relationship between these audit estimates and the recorded amount of the balance. The model is used to determine the amount of the investigation threshold that optimally controls for the two types of audit detection risk.

Expertise Research

Cognitive Processes

Questions Addressed	Major Findings
Libby (1975)	
What is the role of prior knowledge of financial statement errors in the generation of initial diagnostic hypotheses in preliminary analytical procedures, what are the knowledge structures that underlie the decisions of experienced auditors, and what is the manner in which diagnostic hypotheses are generated in analytical procedures?	There appears to be a strong relationship between the availability of hypotheses in memory and their perceived frequency of occurrence. There appears to be a positive relationship between perceived error frequency and actual error frequency in practice. Errors that overstate income or liquidity are perceived as more likely to occur than the equivalent understatement errors. There appears to be a positive relationship between recency of experience and the likelihood of generation of a particular hypothesis.
Blocher and Cooper (1988)	
What is the nature of the auditor's predecisional behaviors in employing analytical procedures?	The decision processes of five auditors were studied using protocol analysis. There were relatively few differences between them. However, one was "directed decision maker," who also was the only one who postponed his final decision after all information had been gathered. The others were "systemic decision makers," and also made their decision at some point as they went along. There was also a wide range of decision-making times. The directed decision maker took 37 minutes; the others took 60 to 106 minutes. Ratios and trends were used extensively. The most frequently used (to search for material error in inventory) are gross profit percentage ratio, total inventory trend, trend of the gross profit percentage ratios, sales trend, and inventory turnover ratio. Of seven decisions, one got four correct, three got three correct, and one got one correct. There was a positive correlation between time, directness in decision making, and

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Questions Addressed	Major Findings
	decision maker's length of experience (reflecting the qualities of an "expert decision maker"). The more experienced decision maker had more correct decisions than the others.
Biggs, Mock, and Watkins (1988)	
How do auditors use analytical procedures, what differences exist between expert and novice auditors, how do they represent problems, and what is their knowledge base?	The subjects apparently relied heavily on analytical procedures in making their decisions. Experts seem to have more complete memory structures related to the audit problem, these memory structures seem to allow a more efficient processing of case information, and they may have made audit program decisions that were more cost effective.
Bonner (1990)	
How does task-specific knowledge affect analytical risk assessment?	Task-specific knowledge is used to study the effects of experience in two audit tasks: analytical risk assessment and control risk assessment. The findings are reported for two dependent measures—cue selection and cue weighting, and for two participating CPA firms. The results for cue selection are not significant for Firm 1 and not significant for control risk assessment for Firm 2; there is significantly higher performance by the experienced group for analytical risk assessment for Firm 2. However, Firm 2 uses a decision aid for analytical review, whereas Firm 1 does not, which could account for the results.
Heiman (1990)	
What is the effect on the likelihood assessments (of the cause for an unusual account change) of differences in the number of available explanations of unusual changes in financial statement relationships?	The findings showed a decrease in the assessed likelihood of a given hypothesized cause when alternative explanations are provided to the auditor. Also, varying the number of alternative explanations had an effect on the likelihood assessments, while varying the strength of the alternatives had no effect.

Questions Addressed	Major Findings
Davis (1991) What is the impact of the auditor's knowledge base and experience on the ability to identify material errors?	Using a protocol approach and experimental testing, the author examined the auditor's information search patterns and found no apparent experience-related differences in the organization of the auditor's knowledge bases. However, an error-sorting task revealed experience-related differences in the organization of accounting knowledge. Also, general audit experience was not found to significantly affect the auditors' ability to identify material errors, although there was some evidence that formal education in the use of analytical procedures was associated with better problem identification ability.
Bedard and Biggs (1991) The study analyzes how decision processes, including both hypothesis generation and pattern recognition, of auditors are associated with performance in analytical procedures. The research questions are: • Are auditors able to generate correct hypotheses? • What processes lead to correct performance? • If the correct hypothesis was not selected, was the pattern of discrepancies recognized? • What specific processes of hypothesis generation inhibited subjects from explaining the recognized pattern?	The study involved both an experimental design and protocol data collection. The results showed that of the twenty-one auditors, three failed to attend to critical cues in the experimental case, and four failed to combine these cues properly. Of the fourteen auditors who correctly recognized the cue pattern, six proposed a hypothesis consistent with the pattern. Thus, hypothesis generation was the stage of the decision process where most errors occurred in this task context. The authors conclude that the design allowed insight into the auditors' decision processes, and provides focus for further research and decision aid development.
Blocher, Bouwman, and Davis (1992) What is the role of causal modeling and outcome feedback in learning analytical procedures from experience?	This paper reports the findings of a review of the research in accounting, auditing, clinical psychology and learning, and the implications of this research for how auditors learn

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Questions Addressed	*Major Findings*
	analytical procedures from experience. Based largely on the research in clinical psychology and the psychology of learning, it develops a theory for how auditors learn analytical procedures from experience. The theory posits the necessity of causal models and unambiguous outcome feedback for effective learning from experience. The implications of this theory within the context of the current practice of analytical procedures is that there is little or no learning from experience, since (1) outcome feedback regarding the effectiveness of analytical procedures is incomplete in the typical audit, (2) there is a general lack of causal modeling in the analytical procedures used today and in the education and training of the procedures, and (3) outcome feedback regarding the performance of analytical procedures is not sufficiently timely to be effective for learning. Recommendations are presented and discussed: (1) the need for greater emphasis on the development of causal models in education, training, and professional guidance, and (2) the need for the development, as part of a firm's quality control program, of a process for systematically obtaining relevant performance data for analytical procedures.
Selection of Procedures	
Holder (1983)	
How do practitioners select and apply analytical procedures in planning an audit?	A wide range of analytical procedures was selected by practitioner-subjects. Extensively or frequently used analytical procedures in this study are: • Inventory turnover • Gross margin ratio • Accounts receivable aging analysis • Plant asset level trend • Inventory level trend • Accounts receivable level trend • Current ratio • Bad debt level trend • Interest expense to debt

Questions Addressed	*Major Findings*
	• Financial statement element fluctuation analysis • Interest expense level trend • Days outstanding revenue • Depreciation level trend The analytical procedures selected focused on liquidity and profitability, as well as the reasonableness of specific account balances. There was no significant difference in selection based on firm size.
Blocher, Esposito, and Willingham (1983)	
What is the nature of the auditors' decision making when (1) planning for the use of analytical procedures, and (2) applying analytical procedures to a given set of audit circumstances?	There is considerable variability in auditor judgment concerning the allocation of budgeted hours between analytical procedures and tests of details, reflecting different preferences for the approach to use. Trend analysis was a widely chosen analytical procedure. Few chose a reasonableness test with operating data, which would have been a much more effective test. In planning, auditors tended to anchor on the given audit program, rather than to tailor it. Use of a checklist of selected analytical procedures motivated more analytical procedures, but also motivated more detailed tests in the same area.
Biggs, Mock, and Watkins (1988, 1989)	
How do experienced and inexperienced auditors design and conduct analytical procedures and revise audit programs as a result of these procedures?	The findings are that both experienced and inexperienced auditors identified the crucial audit problems embedded in the experimental case. However, there was little evidence that the auditors used the analytical procedures to reduce the extent of other substantive tests, even if the results of the procedures were favorable. Also, there was evidence that the more senior auditors' decision processes were more systematic and focused than that of the less experienced auditors who appeared to "respond to surface features of the problem" and to search less efficiently through the case data.

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Questions Addressed	*Major Findings*
Cohen and Kida (1989)	
In a follow-up to the Biggs, Mock, and Watkins (1988) study, this research looks at similar questions: • Do auditors use the results of analytical procedures to reduce as well as extend audit testing? • Does the reliability of data affect auditors' judgments? • Does experience affect auditors' judgments?	The findings corroborated those of the prior study by Biggs, Mock, and Watkins (1988). Also, there was evidence that analytical procedures were valued more highly by the more experienced auditors, while there was greater reliance on control risk assessment by the less experienced auditors.
Generation of Expected Values	
Biggs and Wild (1985)	
What is the nature of the judgments made by practicing auditors in conducting analytical procedures tasks (specifically, generating expected values and noninvestigation intervals)?	Experiment one showed that auditors' judgments were biased in the direction of the unaudited information. However, this bias was moderated when additional audited information was available. Experiment two showed that the auditors' extrapolations were more accurate for those time-series patterns that are more likely to be encountered in practice.
Blocher (1985)	
What is the auditor's ability to determine subjectively expected values and credible intervals, based on seven prior years' data?	The auditors' predictions were significantly too high when no trend was present, and significantly too low when a trend was present. The predictions were less accurate under the high variance condition. Confidence bounds were affected by the variance treatment in the expected direction. There appear to be important individual differences among auditors and other subjects when making predictions and assessing confidence bounds. There also appear to be strong differences among auditors in the nature of the decision process employed in making predictions and in setting confidence bounds.

Questions Addressed	*Major Findings*
Heintz and White (1989)	
The study replicates the prior work of Kinney and Uecker (1982) and Biggs and Wild (1985). Are auditors' predictions in analytical review influenced by unaudited values? And, does a decreasing series of unaudited values have a greater or lesser impact than an increasing series of unaudited values?	The findings for both experimental questions corroborate the results of the prior studies: (1) auditors' judgments are affected by unaudited values, and (2) auditors' judgments are more affected by trend reversals or increases. Also, it is shown that a decreasing series of unaudited values has a stronger influence on auditors' judgments than a series of increasing values.
Wild and Biggs (1990)	
The authors recognize the potential problem of bias caused by the auditor's use of unaudited book values when designing and performing analytical procedures. What are the audit cost and risk consequences of conducting the procedures with and without unaudited book values?	The study concludes that the advantages of incorporating unaudited book values into analytical procedures appear minimal.
Use of Decision Aids	
Blocher and Luzi (1987)	
What is the effect of selected forms of guidance on auditors' analytical procedures decisions?	With increasing structure, guidance increases the proportion of auditors with correct models (to develop expected values) and decreases the proportion of those having computational misspecification. Guidance treatment did not significantly affect the auditors' testing decisions, except that more guidance provided greater confidence in analytical procedures, which in turn resulted in lower detailed tests.
Blocher, Krull, Scalf, and Yates (1988)	
Does a knowledge-based decision aid for analytical procedures have an effect on learning or on the performance of these procedures by experienced auditors?	The decision aid had a positive but insignificant effect on performance. However, there was no effect on learning; this was interpreted as being consistent with the prior research.

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Questions Addressed	Major Findings

Bankruptcy Prediction

Discriminant Analysis

Beaver (1966)

Questions Addressed	Major Findings
What is the usefulness of financial ratios, and in particular, in the prediction of business failure?	The ratio distributions of nonfailed firms are quite stable throughout the five years before failure, whereas the ratio distributions of failed firms exhibit a marked deterioration as failure approaches. The cash-flow to total-debt ratio has the ability to correctly classify both failed and nonfailed firms to a much greater extent than would be possible through random prediction. This ability exists for at least five years before failure. Although ratio analysis may provide useful information, ratios must be used with discretion. Not all ratios predict equally well, and nonfailed firms can be correctly classified to a greater extent than can failed firms.

Deakin (1976)

Questions Addressed	Major Findings
How effective is a discriminant analysis-based model using the fourteen financial ratios from Beaver (1966)?	The model developed made accurate bankruptcy predictions as far in advance as three years before filing for bankruptcy. The overall classification error for both bankruptcy and nonbankruptcy ranged from 9 to 19 percent.

Altman and McGough (1974)

Questions Addressed	Major Findings
How effective is a discriminant analysis model in the prediction of bankruptcy and the evaluation of going concern?	For commercial and manufacturing companies, the model predicted bankruptcy in 82 percent of the cases based on the latest available financial statements prior to bankruptcy, and 58 percent of the cases two years prior to failure.

Gambola, Haskins, Ketz, and Williams (1987)

Questions Addressed	Major Findings
This study considers the importance of cash flow from operations in predicting	The study found that the marginal predictive ability of cash flow from operations was insignificant, and therefore, that cash flow

Questions Addressed	*Major Findings*
bankruptcy. It includes a review of prior relevant studies, and then conducts experiments in which models were constructed from bankrupt firms. These models were then tested for predictive accuracy with data from other firms. Is cash flow an important predictor?	from operations is not an important predictor of corporate failure.
Bell, Ribar, and Verchio (1990)	
This paper considers the comparative effectiveness of two types of models—logistic regression and neural network —in predicting failure of commercial banks. The predictor variables used are those used by regulators and supported by prior studies. The focus is a one-year prediction period, consistent with the requirements of SAS No. 59. Do the models differ significantly in prediction performance?	The study indicates that both types of models perform satisfactorily, with neural networks performing slightly better for borderline cases.
Subjective Prediction	
Libby (1975)	
What is the predictive power of ratio information and the ability of loan officers to evaluate that information in the business failure prediction context?	Bankers using financial ratio information were able to make highly accurate and reliable predictions of business failure.
Kennedy (1975)	
What is the effect of four financial ratios on subjective probability judgments about bankruptcy (by bankers) using Bayes' theorem?	The equity to debt ratio is very useful in the task. The usefulness of other ratios studied (quick, current, and inventory turnover) was not clear. Bankers believe that nonfinancial and financial information are equally important, and nonratio financial information is significantly more important than ratio information in evaluating bankruptcy potential.

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Questions Addressed	*Major Findings*
Casey (1980)	
What is the ability of bank officers to predict bankruptcy using three years' data, three years in advance (the data consisted of five common solvency-related ratios)?	Predictive accuracy for bankrupt firms is not very good (average, four of fifteen). Individual differences in information-processing style and confidence level could explain a statistically significant portion of variance in subjects' predictive achievement. A composite-judge prediction model did not outperform the average subject.

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Research in the Auditor's Responsibilities Regarding Illegal Acts by Clients

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This study communicates the implications of existing research for establishing and implementing auditing standards related to illegal acts by clients and proposes some topics for future research. To frame the discussion of extant research, the study uses the following broad categories relevant to auditors' responsibilities regarding illegal acts: definition, prevention, detection, evaluation, disclosure, and consequences.

It is fitting that the Expectation Gap Roundtable includes the topic of illegal acts. Attempts to reduce the perceived gap between users' expectations and professional guidance on auditors' responsibilities have been the catalyst for the origination and evolution of Statements on Auditing Standards (SASs) related to illegal acts. A separate SAS on illegal acts by clients was first issued in response to users' concerns with corporate accountability (see SAS No. 17). These concerns in the mid-1970s followed investigations that lead to disclosures by large corporations of illegal political contributions and questionable payments to domestic and foreign government officials (Neebes, Guy, and Whittington 1991). In turn, after a period in the early 1980s of major business failures, where some failed businesses also had illegal acts, auditors' responsibilities were revised as part of the expectation gap SASs (see SAS No. 54).

The existence of an expectations gap and an inability to eliminate the gap is not surprising. As the Cohen Commission stated, "the expectations of users of financial information with respect to the auditor's detection and disclosure of illegal or questionable acts are unclear" (The Commission on Auditors' Responsibilities 1978). In addition to being unclear, users' expectations lack consensus at any point in time and change over time. Furthermore, as the Cohen Commission recognized, legislative initiatives

play a significant role in clarifying users' expectations (e.g., The Foreign Corrupt Practices Act of 1977). These legislative initiatives continue.[1] Finally, assessing users' expectations becomes complicated when considering the international environment, where there is likewise concern with auditors' responsibilities regarding illegal acts. The International Auditing Practices Committee (IAPC) recently issued an exposure draft titled *Illegal Acts* (December 1, 1991).[2]

This background provides a context for our charge, which is to communicate the implications of existing research for establishing and implementing auditing standards related to illegal acts by clients and to propose topics for future research.[3] We assume that readers are familiar with past, present, and proposed professional standards (i.e., SAS No. 17 and No. 54 and the (IAPC Exposure Draft). Although we do not review the provisions of these standards, we include in the Appendix the practice and implementation issues identified by the SAS No. 54 Guidance Task Force of the Auditing Standards Board (ASB) and reported by practitioners to the Auditing Standards Division as input for the Roundtable.

To frame our discussion of the research, we developed the following broad categories relevant to auditors' responsibilities regarding illegal acts: definition, prevention, detection, evaluation, disclosure, and consequences. Some studies overlap categories, therefore we have, for example, combined detection and evaluation in this overview of relevant research. The remaining sections of the paper discuss the existing research and provide suggestions for future research.

Discussion of Research

In reviewing the literature, we confronted a paucity of theoretical and empirical research specifically addressing auditors' responsibilities regarding illegal acts by clients. Therefore, our discussion also incorporates other research involving illegal acts from which we attempt to extrapolate implications for auditors.

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1 For example, see the Federal Deposit Insurance Corporation (FDIC) Improvement Act of 1991, the proposed Financial Fraud Detection and Disclosure Act (HR 4313), and the proposed Federal Insurance Solvency Act of 1992 (HR 4900).

2 Standard-setters in some countries (e.g., Canada and the United Kingdom) are also considering the promulgation of new guidance on auditors' responsibilities regarding illegal acts by clients.

3 Although illegal acts and compliance auditing issues interrelate, this paper focuses primarily on illegal acts. Past and present standards for compliance auditing include SAS No. 63 and No. 68. Holder and Miller (1989) and McNamee, Monk, and Sauter (1989) describe the requirements of SAS No. 63.

Definition

Definitions of illegal acts in the professional literature differ somewhat, especially in emphasis. In contrast to SAS No. 54, the IAPC Exposure Draft explicitly recognizes that illegal acts may be intentional or unintentional, suspected or actual, and that noncompliance with laws and regulations encompasses both acts committed and required acts not carried out. The IAPC Exposure Draft does not use the SAS No. 54 terms *direct* and *indirect*. Instead, the Exposure Draft states that illegal acts may affect either recorded amounts in the financial statements or footnote disclosures.

The research literature tends not to distinguish between illegal acts using either direct–indirect or financial statement–footnote effects. Some studies include only intentional illegal acts. Definitions of illegal acts differ among studies, however, and these differences require consideration when comparing results.

Research studies on illegal acts reflect another definitional problem that Goldwasser (1987) anticipated, namely that distinctions between irregularities and illegal acts (in SAS No. 53 and No. 54) are difficult to maintain in practice. According to Goldwasser, "irregularities and illegal acts are not so easily separated, as illegal actions are more often than not accompanied by irregularities which frequently are integral parts of the illegal acts." This problem will resurface in the discussions of both disclosure and consequences research.

At a conceptual level, a research monograph by Mautz and Sharaf (1961) illustrates an approach of working from a definition to establish independent auditors' responsibilities. Although Mautz and Sharaf focus on irregularities, not illegal acts,[4] their discussion contains concepts evident in SAS No. 54. For example, Mautz and Sharaf acknowledge that materiality may differ (in both kind and amount) when applied to irregularities as opposed to representations regarding financial condition and results of operations. Mautz and Sharaf recognize that auditors' responsibilities are limited to their areas of expertise. Finally, auditors' responsibilities may decrease in situations where there is no record or evidence of accountability.

Although SAS No. 54 reflects these concepts, Mautz and Sharaf conclude that "the characteristics of irregularities themselves [did not provide] any significant clues which permit a precise statement of auditor responsibility for detection." This led Mautz and Sharaf to propose a prudent-man concept of due care, whereby, "independent auditors should accept responsibility for the discovery and disclosure of those irregularities which the exercise of due audit care by a prudent practitioner would normally

[4] With the exception of Mautz and Sharaf (1961), this paper does not discuss research related specifically to errors and irregularities (SAS No. 53), a topic of another Roundtable paper.

uncover." It seems reasonable to surmise that Mautz and Sharaf would support a similar conclusion for illegal acts.

Prevention

The professional literature, including the reports of the Cohen and Treadway Commissions, affirms that management has primary responsibility for prevention of illegal acts. The IAPC Exposure Draft explicitly states that the responsibility for the prevention and detection of illegal acts rests with management. Giving management primary responsibility still leaves a variety of corporate governance mechanisms for carrying out and monitoring this responsibility. These mechanisms include (outside) board membership, audit committees, corporate codes of conduct, internal control (including internal auditors), and special management reports on compliance. An obvious research question is the viability of these mechanisms for preventing (and detecting) illegal acts.[5]

A survey published by the United States Government Accounting Office (GAO) in 1991 provides disquieting evidence on the ability of bank audit committees to monitor compliance with laws and regulations. The GAO studied the audit committees of the largest banks in the United States—those with assets of ten billion dollars or more. On the basis of responses from forty of forty-seven audit committee chairpersons, the results related to illegal acts include:

- Nineteen audit committees (48 percent) had little or no expertise in banking, although their committees were responsible for approving the bank's response to findings from bank regulatory examinations.
- Thirteen audit committees (33 percent) had no expertise in law and never met independently with the bank's legal counsel, although they were responsible for assessing management compliance with banking laws and regulations.

We located one study that examines the relation between the number of outside directors and illegal acts by Fortune 500 companies. Kesner, Victor, and Lamont (1986) find: (1) no relation between the number of outside directors and the propensity to commit an illegal act, (2) no relation between committing an illegal act and the propensity to then add an outside director to the board, and (3) no relation between the propensity to commit an illegal

[5] There are some studies on the prevalence of illegal acts. For example, a *Fortune* survey (Ross 1980), using only five types of corporate illegalities (bribery, criminal fraud, illegal political contributions, tax evasion, and criminal antitrust violations) from 1970 to 1980, found that 117 of 1,043 (11 percent) major corporations had at least one important illegal act. A GAO report (1989) on twenty-six thrifts, representing the largest actual or estimated losses to FSLIC between 1985 and 1987, indicates nineteen of the twenty-six (73 percent) had actual or suspected criminal activities.

act and organizational structure (i.e., having one individual as both the CEO and chairman of the board). Several other studies examine additional organizational and operational characteristics associated with corporate involvement in illegal acts. The results of these studies, however, may be interpreted as providing guidance to the profession on signals that alert the auditor to possible illegal acts. Hence, in the next section, we discuss those studies that consider issues related to detection and evaluation rather than prevention.

Before concluding this section, we want to mention that some research provides at least indirect support for the use of mechanisms such as internal control for the prevention of illegal acts. For example, Kinney, Maher, and Wright (1990) propose a broad output-based approach to determining assertions. In turn, "corporate management. . .chooses cost-effective controls for their own internal purposes, subject to the constraint that controls be adequate to support the implicit and explicit assertions required of management by outsiders."[6]

Detection and Evaluation

In this section we discuss several types of detection- and evaluation-related research. One type provides insights on organizational variables associated with the occurrence of illegal acts. We discuss these studies because of their potential relevance in alerting auditors to the possibility of illegal acts. Another type of study provides some evidence on disclosures to independent auditors of illegal acts detected by internal auditors. This work is relevant to the propriety of external auditors relying on the work of internal auditors to detect corporate illegal acts.[7] Finally, we discuss a study that addresses a specific area of illegal acts—environmental liabilities. This study proposes that auditors consider environmental acts in planning and risk assessment, although SAS No. 54 might characterize such acts as indirect.

An early study by Staw and Szwajkowski (1975) examines the relation between scarcity/munificence of organizational environments and the occurrence of illegal acts. The study uses a sample of 105 large companies involved in trade litigation from 1968 to 1972. Trade litigation includes price fixing, reciprocity, mergers and acquisitions in restraint of trade, refusals to deal, monopoly, tying arrangements, price discrimination, allocation of markets,

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[6] This research suggests means to implement requirements such as those in the FDIC Improvement Act of 1991, whereby

> Management will report annually on its responsibility for and assessment of the effectiveness of both the institution's internal control stucture over financial reporting and compliance with specified laws and regulations relative to safety and soundness. The CPA will report separately on management's assertions using standards for attestation engagements (AICPA/1992).

[7] We do not discuss the wide-ranging research literature on whistle-blowing. For some discussion of this research, see Arnold and Ponemon (1991) and Graham (1986).

and activities such as foreclosure of entry, exclusive dealing, and conspiracy.[8] Scarcity/munificence is measured using several financial performance statistics (i.e., mean return on equity, mean return on sales over the five years preceding a trade complaint, percentage change in sales, and percentage change in profits). Comparisons of cited and uncited Fortune 500 companies reveal that: (1) cited companies perform less well than other firms in the Fortune 500 over the five years preceding a trade complaint, (2) whereas cited firms perform below the average of all Fortune 500 firms, they perform no worse than other firms in their industries, and (3) industries in which cited firms operate display performance far below the average for all industries.

A study by Dalton and Kesner (1988) concludes that company size may be relevant to the commission and recidivism of illegal acts. Again using a sample of Fortune 500 companies (continuously listed on the Fortune 500 from 1980 to 1984), the authors report that: (1) "large" companies are three times more likely to engage in illegal behavior than "small" counterparts, and (2) "large" firms are significantly more likely than "small" firms to commit a second illegal act conditional on committing a first act within the sample period. The study also found that 74.6 percent of sample companies did not engage in a cited illegal act over the period, 11.5 percent committed a single act, and the remaining 13.9 percent committed multiple acts.

Baucus and Near (1991) present a more comprehensive examination of the association of organizational variables and illegal acts. Their sample includes Fortune 500 companies convicted during 1974–1983 of intentional illegal acts committed during 1963–1981. The sample consists of 141 violations by 88 firms where violations include Title VII discrimination (49 percent), antitrust (20 percent), product liability (12 percent), and other (19 percent) (e.g., violations of consent decrees for securities fraud, willful patent infringement [with punitive damages]). The authors summarize their results as follows:[9]

> . . . [L]arge firms are more likely to commit illegal acts than small firms. Although the probability of such wrongdoing increases when resources are scarce, it is greatest when resources are plentiful. Similarly, illegal behavior is prevalent in fairly stable environments but is more probable in dynamic environments. Membership in certain industries and a history of repeated wrongdoing are also associated with illegal acts.

The study found that, with a single exception, corporate culture is not a significant determinant of the propensity to commit an illegal act. The

[8] Dalton and Kesner (1988) report that trade case corporate violations account for some 40 percent of violations of criminal statutes in federal courts.

[9] Accounting researchers may find the authors' proxies for some organizational variables problematic.

exception is the finding that firms that have committed at least three violations are more likely to commit a fourth. The industries found more likely to be involved in illegal acts are food, lumber, petroleum and refining, and transportation equipment. Finally, variables not found to be significantly associated with the commission of illegal acts include organizational heterogeneity (degree of diversity within the organization and internal competitiveness), poor financial performance (return on assets), and organizational slack (quick ratio relative to industry average).

In summary, despite being of limited scope in addressing issues related to auditors' responsibilities (e.g., samples comprise only Fortune 500 companies and use restricted definitions of illegal acts), these studies do provide some insights for auditors. Industry membership consistently appears as an important variable. While reinforcing the importance of industry membership, more recent data, using other than Fortune 500 samples, might expand the identified industries, in particular, to encompass financial institutions. Interestingly, the most recent study finds both weak and strong financial performance associated with illegal acts.

An important caveat to this work is recognized by Baucus and Near (1991):

> . . . rather than revealing when illegal behavior is likely to occur, the results of our study and of previous studies of corporate illegality may instead reveal conditions under which illegal behavior is detected, prosecuted, and punished. For example, regulatory agencies are likely to monitor firms previously convicted for illegal activities closely. Additionally, regulatory agencies are likely to increase enforcement during certain periods, as when the national political climate favors enforcement; the latter provides another explanation for the infrequency of violations in certain years just noted. At this point, little is known about how regulatory agencies select firms for investigation or prosecution; thus, researchers need to begin to focus on the relationship between enforcement and illegal activities.

These comments certainly apply to audit-related research issues on illegal acts.[10]

The preceding discussion focused on the relation between firm-specific variables and the propensity to commit illegal acts. Identifying such relationships may be useful in directing auditor attention to those clients most likely to be involved in illegal acts. A second area of interest concerns the mechanisms by which auditors can effectively become aware of such activities. Of course these mechanisms include audit procedures.

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[10] For example, although not limited to illegal acts, a study by Feroz, Park, and Pastena (1991) includes an examination of the types of accounting and auditing problems that motivate SEC enforcement actions.

Regrettably, we could not locate any research that systematically documents the frequency with which auditors detect illegal acts, the procedures utilized by independent auditors, or the effectiveness of such procedures. These remain important areas for future research.

Independent auditors may consider some reliance on internal auditors for detecting and evaluating illegal activities. A study by Miceli, Near, and Schwenk (1991) examines the effect of a number of perceptual variables on internal-auditor reporting of observed wrongdoings by employees and managers in their organizations. The reporting by internal auditors includes disclosing observed wrongdoing to independent (external) auditors. The study uses data from a survey of directors of internal audit in North America who were also members of the Institute of Internal Auditors (IIA) in 1986. The study comprises all types of organizations (public, nonpublic, not-for-profit, and governmental). Rather than illegal acts, the study examines "wrongdoing," defined as engaging in theft, abusing organizational position to receive special favors, accepting bribes or kickbacks, giving unfair advantage to vendors or contractors, tolerating a situation that endangers public health or safety (including product development), wasting corporate assets, covering up poor performance, making false projections of future performance, and committing serious violations of company policy or other illegal acts.

Miceli, Near, and Schwenk (1991) received 1,046 useable responses, of which 756 (72 percent) observed evidence of wrongdoing in the past twelve months. Of these 756, sixty-five (9 percent) did not report the wrongdoing to anyone; 419 (55 percent) reported it only to someone within the organization (e.g., to department heads, boards of directors, and to audit committees), 164 (22 percent) reported it to the external auditor but did not report it to any other external agency (all but two of these also reported it internally); and 108 (14 percent) reported it to an external agency (e.g., the media, a government agency, the IIA; all but thirteen of these also reported it internally). The authors summarize the factors associated with the reporting of wrongdoing as follows:

> Survey responses of Directors of Internal Auditing who observed what they perceived to be incidents of wrongdoing show that they were less likely to report these incidents when they did not feel compelled morally or by role prescription to do so, when they evaluated their job performance as below average, or when they were employed by highly bureaucratic organizations. Also, the Directors of Internal Auditing were more likely to report incidents to external agencies (i.e., external auditors, the media, government agencies) when they felt that the public or their co-workers were harmed by the wrongdoing, the wrongdoing involved theft by relatively low-level workers, there were few other observers, or the organization was highly regulated.

A number of extensions to this line of research could be of relevance to auditing standard setters. An interesting follow-up would be to determine the portion of the 419 (and sixty-five) that the external auditor learned from other sources, as well as the portion that he or she never learned about. Other extensions include exploring which wrongdoings external auditors should be expected to detect and determining any differences in expectation for detection among auditors' constituencies (e.g., management, audit committees, investors, and regulators).

Finally, the study of most explicit relevance to considering auditors' responsibilities regarding illegal acts is by Roussey (1992). Roussey reviews a series of relevant environmental laws and regulations; reviews the existing accounting and auditing guidance including generally accepted accounting principles (GAAP), generally accepted auditing standards (GAAS), SEC, and AICPA Audit Risk Alert; and discusses the accounting measurement and disclosure problems, and auditing issues including reporting issues.[11] In attempting to apply the guidance of SAS No. 54 to this area of illegal acts, Roussey concludes that viewing environmental acts as indirect illegal acts would be incomplete. Roussey argues that auditors need to consider environmental acts in risk assessment and planning and he proposes extended auditing procedures if the client is identified as being at risk for environmental liabilities.

Disclosure

Regulatory and international events suggest increased pressures on independent auditors for disclosing illegal acts. The FDIC Improvement Act of 1991 contains provisions for disclosure of illegal acts by independent auditor attestation to management assertions of compliance with specified laws and regulations relative to the safety and soundness of financial institutions. The proposed Financial Fraud Detection and Disclosure Act (HR 4313) would require independent auditors to respond in certain circumstances when senior management–boards of directors fail to take remedial action with respect to illegal acts and where such failure is reasonably expected to warrant modified reporting or auditor resignation. The ultimate outcome of these situations is notification of the SEC by the client or the auditor. Internationally, the events surrounding the Bank of Credit and Commerce International (BCCI) have resulted in public discussions of auditors' responsibilities for disclosing illegal acts (see Cowan 1991).

Public companies and specific industries such as financial services and insurance tend to be the focus of recent proposals or actual revisions in

[11] Two recent studies in the *Journal of Accountancy* provide guidance to auditors (Zuber and Berry 1992) and survey current corporate practices (Surma and Vondra 1992) in accounting and reporting environmental activities.

auditors' disclosure requirements of illegal acts. Currently a disclosure mechanism for public companies exists in conjunction with auditor–client disagreements in the context of auditor change. In this regard, Goldwasser (1987) expresses concern that SAS No. 54 does not specify precisely when auditor change (resignation) in conjunction with illegal acts results in a reportable disagreement on Form 8-K.

For nonpublic companies, not subject to specific industry regulations, there may be a tendency to assume in conjunction with auditor change that the predecessor–successor auditor communication will alert potential successors and actual successor auditors to the possibility of illegal acts by clients. However, a number of studies (e.g., Hull and Mitchem 1987, Niles and Palmrose 1989, and Lambert, Lambert, and Calderon 1991) provide consistent evidence that these communications do not always occur, irrespective of client permission considerations.

Consequences

Empirical research provides evidence on two types of consequences—litigation and auditor change—related to auditors' responsibilities for illegal acts. Legal liability might be expected as a major concern of illegal acts by clients. Although we did not locate any studies providing direct systematic evidence on auditors' legal liability of illegal acts, Palmrose (1987) provides some indirect evidence. In a sample of 472 observations involving audit-related litigation during 1960–1985 for the largest fifteen or so audit firms, seven (1 percent) observations involve only illegal acts (i.e., illegal acts not in conjunction with other errors or irregularities). Most of the seven observations consist of illegal political contributions and foreign payments (before the passage of the Foreign Corrupt Practices Act of 1977). Palmrose reports resolution information for a few of the seven observations; all are resolved by courts dismissing auditors or by auditors declining to contribute to settlement funds.

In using litigation evidence to examine auditors' responsibilities, including changes over time in responsibilities, it is important to consider auditor litigation relative to the overall level of litigation in the particular area. For example, not only does litigation relating exclusively to illegal political and foreign payments represent a small subset of auditor litigation, auditors do not appear to be defendants in a major portion of the overall litigation that occurred in this area. Olson (1982) reports that more than 200 companies had foreign and domestic bribes and kickbacks in the early 1970s. Although he does not report the number of companies that also had shareholder class and derivative actions over these matters, the number likely includes a majority of the 200; a number much greater than the number of auditor legal actions. What appears to be a low level of auditor involvement in this area of litigation represents an issue for further research. It also suggests

the possibility that clients' corporate governance structures are important (ex-post) for risk sharing, as well as (ex-ante) for prevention of illegal acts. Further research is also required to assess the nature and extent of auditor involvement in other types of illegal act litigation, as Roussey (1992) suggests with respect to environmental acts.

Before completing this discussion of litigation, we want to mention that one of the authors' casual reviews of a data base expanded from that in Palmrose (1987) does not substantially change the evidence reported. The data base consists of about 900 audit-related litigation observations from 1960 to 1992 for the largest audit firms. Perhaps ten observations relate to illegal foreign and political payments. Considering all types of illegal acts, there appears to be an important industry component associated with illegal acts. For example, litigation involves clients in financial service industries including brokerages and insurance, utilities, waste disposal, and government contracting. A few municipalities have auditor litigation in connection with violations of investment regulations. In the expanded data base, there are a few instances of relatively substantial settlement payments by auditors in connection with illegal acts by clients.

Furthermore, the expanded data base supports Goldwasser's (1987) comments. Most illegal acts appear together with other irregularities such as management fraud. Therefore, in assessing litigation consequences, it is necessary to identify the impact of various types of claims. For example, allegations against auditors for failure to detect and disclose clients' illegal activities may be deleted in amended complaints or dismissed by courts. If so, such allegations have little impact on outcomes when litigation continues against auditors for other allegations, although the illegal act claims still entail some defense costs. On the other hand, illegal act-related claims may substantially affect legal negotiations and outcomes even when such claims occur along with claims for failure to detect and disclose client irregularities. Finally, some clients' illegal activities, whether alone or together with irregularities, have secondary impacts. They affect other entities. These effects may likewise produce auditor litigation. Secondary impacts appear most prevalent for clients in financial services industries (e.g., Penn Square and ESM). When secondary impacts occur, regulatory pressures on auditors may increase.

A study in progress by Christensen and Byington (1992) pursues the issue of auditor change in connection with illegal acts. Unfortunately, the authors define illegal acts quite broadly. Their sample includes as illegal acts any mention of litigation in corporate annual reports (i.e., in the financial statements, footnotes, president's report, or audit report). Of the 11,788 companies listed on Compact Disclosure, 1,923 (16.3 percent) have some type of litigation disclosure (by definition an illegal act) and 305 (2.6 percent) changed auditors. Using the authors' data, we computed the following proportions:

Percentage of Auditor Changes With Litigation Disclosures (80 of 305)	26.2 percent
Percentage of No Auditor Changes With Litigation Disclosures (1,843 of 11,483)	16.0 percent
Percentage of Companies With Litigation Disclosures That Changed Auditors (80 of 1,923)	4.2 percent
Percentage of Companies With No Litigation Disclosures That Changed Auditors (225 of 9,865)	2.3 percent

Since the study is preliminary, it does not provide any evidence after controlling for confounding events. Also, the authors note that the study does not determine who initiated the change, the auditor or the client.

Future Research

In our discussion of extant research related to the definition, prevention, detection, evaluation, disclosure, and consequences of auditors' responsibilities regarding illegal acts by clients, we made a number of suggestions for future research. We conclude with some additional suggestions based on the effectiveness of SAS No. 54 and issues that arise from its implementation.

Some of the issues come from our discussions with colleagues and practitioners. This does not imply unanimity that SAS No. 54 needs to be reconsidered. Some believe it does not. This belief was supported, for example, by arguing a paucity of significant auditor litigation involving illegal acts. Yet, some perceive a lack of agreement on what should be or is the auditor's responsibility for detecting and revealing illegal acts by clients.

In considering SAS No. 54, there is a fundamental question. Why continue to have a separate SAS for illegal acts? Determining the nature of the demand for a separate SAS and understanding changes in the demand since promulgation of SAS No. 17 and No. 54 may alter or eliminate current guidance.

The most frequently identified difficulty with SAS No. 54 is in classifying a law or regulation as direct or indirect. Since this classification determines the auditor's responsibilities, any difficulty is worrisome. If, indeed, the direct/indirect categorization is problematic, alternatives should be proposed and discussed. For example, Roussey suggested the following alternate structure to us and we include his suggestion as an illustration:

- Calculation of financial statement amounts (such as under tax laws and government contracts)
- Accrual of loss contingencies (such as for uncertainties where a loss contingency can be estimated for environmental or other requirements)

- Disclosure of loss contingencies (such as for asserted or unasserted claims or assessments for job discrimination or health and welfare laws and regulations)

Left unspecified is the auditor's responsibilities within each category. Yet, it is both the classification scheme for laws and regulations and the auditor's responsibilities under any such scheme that involve unresolved controversy. While current GAAS limit auditors' responsibilities, in particular, for indirect illegal acts, not all proposed schemes would provide either similar or any limitations on auditors' responsibilities for detecting and revealing material illegal acts.

Irrespective of the categorization of laws and regulations, empirical evidence on the efficacy of audit procedures in detecting illegal acts is required. This evidence is particularly important under the procedural approach used in SAS No. 54 to delineate auditors' responsibilities for indirect illegal acts. Future research can help assess whether procedures designated in SAS No. 54 are effective or optimal.

We discussed the continuing emphasis in regulatory initiatives for auditors to externally disclose clients' illegal acts. This emphasis reinforces the need to examine the viability and implications of such reliance on independent auditors. For example, the profession has expressed concern that any expanded responsibility for independent auditors to report publicly on illegal acts will inhibit traditional, and important, communications between auditors and clients (Neebes, Guy, and Whittington 1991).

Although disclosure discussions focus on external disclosures, there are also internal disclosure issues. For example, perhaps consensus is lacking on auditors' responsibilities regarding illegal acts. If so, it may be useful for auditors to explicitly communicate audit scope-related matters to clients and their audit committees.

There are legal and market concerns in addition to the issues already discussed. For example, what are the implications of a proliferation outside GAAS to the auditors' responsibilities regarding illegal acts under the due care standard? Do differential requirements that exist outside GAAS pose the risk that any non-GAAS requirements will be extended, ex post, to GAAS engagements? Since illegal act issues pervade all clients, this seems possible, although the possibility may be mitigated by auditors internally communicating scope-related matters.

On the other hand, Guy and Whittington (1990) comment on potential benefits from expanding the auditor's detection responsibility outside of GAAS by legal requirements for audit reports on the application of agreed-upon compliance procedures. From a research standpoint, they suggest that these requirements provide a new setting to examine contracting for audit services and to explore the demand for assurances regarding compliance with laws and regulations.

These are just a few suggestions for future research. Considering the importance of the issues and the paucity of research specific to auditors, we hope that this study motivates additional research on auditor's responsibilities regarding illegal acts by clients.

Appendix

Practice and Implementation Issues

SAS No. 54 Guidance Task Force (AICPA File Reference No. 3035, May 8, 1991)

1. Should the definition of illegal acts in SAS No. 54 be changed?
2. Should the term and focus of SAS No. 54 be changed from "illegal acts" to compliance with laws and regulations? (Illegal acts covers both intentional and unintentional violations of laws and regulations; however, regulators and others misunderstand the term to cover only intentional violations.)
3. Should the direct versus indirect approach be clarified or amended (e.g., should a procedural approach be followed)?
4. Should the implication that direct-effect illegal acts may involve any of the five financial statement assertions be clarified? (SAS No. 31, *Evidential Matter*, lists five assertions that are embodied in financial statement components; however, direct-effect illegal acts may affect only some of these assertions.)
5. Should the auditor's responsibility for detecting illegal acts having a direct and material financial statement effect be discussed in SAS No. 54 rather than be cross-referenced to SAS No. 53, *The Auditor's Responsibility to Detect and Report Errors and Irregularities*?
6. Should SAS No. 54 be amended to recognize compliance tests that auditors perform (e.g., capital adequacy tests in financial institutions), which are not tests for direct-effect illegal acts?

Practitioner Comments

1. Is additional guidance needed to differentiate between illegal acts and instances of noncompliance that are not illegal?
2. Should there be specific limitations with respect to the types of data to which a practitioner may attest regarding compliance when compliance does not have a financial statement effect?
3. Are the components of the audit risk model applicable to compliance attestation?

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Auditor Attestation to Management Reports on Internal Control—Should It Be Required?

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This paper debates whether auditors should be required to attest to management reports on internal control. It sets a stage for the debate by providing a brief history of the proposals for issuance of managment reports on internal control and auditor attestation to those reports. Arguments for auditor attestation are presented based on the demand for the service and the public interest argument. The demand for the service also provides a basis for arguments against auditor attestation, as well as the cost and benefits of the service.

The question of whether management should be required to issue reports on internal control that are attested to by auditors has been debated for a number of years. Congress, the SEC, and various commissions have proposed such requirements in the past for all public companies, but none has been adopted. Recently, legislation has been enacted that will require management of large financial institutions to issue reports annually that include management's assessment of the institution's internal control over financial reporting. The legislation also requires management to engage an auditor to attest to the reports. In this paper, we debate the issue of auditor attestation of management reports on internal control, providing arguments for and against, and leaving the reader with the obligation to draw a conclusion on the issue. Our debate centers around the issue of whether it is desirable to require companies to issue reports on internal control to regulators or the investing public, or both, that are attested to by independent auditors.

This paper begins with a history of the proposals for management reports on internal control and auditor attestation. A discussion of prior research is

presented next. This is followed by two sections that discuss the arguments for and against auditor attestation of these reports. The last section contains concluding comments.

The History

The first formal proposal for management reports on internal control came in 1978 and was included in *The Report of the Commission on Auditors' Responsibilities* (the Cohen Commission). The Cohen Commission recommended that audited financial statements be accompanied by a report by management that included, among other assertions, an assessment of the company's accounting system and controls over it (The Commission on Auditors' Responsibilities 1978). The Cohen Commission also recommended that auditors expand the study and the evaluation of internal control performed as part of the audit of a company's financial statements to form a conclusion on the functioning of the internal accounting control system. Under the Cohen Commission's recommendations the auditor's report on the financial statements would be expanded to express a conclusion about whether the management's report disclosed all material weaknesses in the internal accounting control system. Underlying these recommendations was a belief that "users of financial information have a legitimate interest in the condition of the controls over the accounting system and management's response to the suggestions of the auditors for corrections of weaknesses."

In 1979, the Securities and Exchange Commission (SEC) issued its first proposal for reports by management. This proposal would have made assertions about the effectiveness of the company's internal accounting control a mandatory part of the report by management. It also called for auditor attestation of the assertions made by management. The proposed rule suggested that information and assurances about the effectiveness of a company's internal accounting control system are necessary to enable investors to better evaluate management's performance of its stewardship responsibilities and the reliability of interim and other unaudited financial information. The SEC's proposed rule was criticized sharply primarily because of the irrelevance of the information contained in the reports and the cost of auditor attestation (Wallace 1981).

The SEC returned to the topic of reporting on internal control in 1988 by issuing a proposed rule that would require a report by management containing the following assertions:

1. Management's assessment of the entity's internal control structure over financial reporting
2. A description of management's response to significant recommendations of internal and independent auditors about the internal control structure

3. An acknowledgment of management's responsibility for preparing the financial statements in accordance with generally accepted accounting principles (GAAP), and establishing and maintaining a system of internal control over financial reporting

The SEC also solicited comments on whether an attestation to the management's report by the independent auditor would be desirable, but that requirement was not included in the proposed rule.

Once again, the proposal for auditor attestation of management's report was met with overwhelming opposition (Solomon and Cooper 1990). Although there was strong support for an acknowledgment of management's responsibility for the financial statements and the system of internal control, most of the respondents did not support inclusion of management's assessment of internal control or management's response to recommendations for improvement in internal control.

Proposed legislation has also contained requirements for auditor attestation of management reports on internal control. As early as 1985, legislative initiatives were proposed that included requirements for management reports on a company's internal accounting control and auditor attestation to the reports. More recently, Representatives Wyden and Dingell introduced legislation that would have required management to report on the effectiveness of their company's internal control over financial reporting and mandated a report by the independent auditor on the management's report. This 1990 proposed legislation was not adopted.

In December 1991, the Federal Deposit Insurance Corporation (FDIC) Improvement Act of 1991 (PL 102-242) was signed into law (Moraglio and Green 1992). This legislation, which applies to financial institutions with total assets of $150 million or more, mandates an annual report by management that includes an assessment of the institution's internal control over financial reporting. The law also includes a requirement for a report by the institution's auditor attesting to management's assertions about internal control. These new requirements are effective for fiscal years ending December 31, 1993. This represents the first legislation requiring any type of entity to provide periodic reports on its internal control over financial reporting that are attested to by the entity's auditor.

Recent recommendations about reports on internal control have also come from the accounting profession. In 1985, the National Commission on Fraudulent Financial Reporting (Treadway Commission or COSO) was created to identify causal factors that lead to fraudulent financial reporting and to make recommendations to reduce its incidence.[1] As one of its recommendations, the Treadway Commission called for an SEC rule that would

[1] The Treadway Commission was jointly sponsored by the American Institute of Certified Public Accountants, American Accounting Association, Financial Executives Institute, Institute of Internal Auditors, and Institute of Management Accountants.

require all public companies to include in their annual reports a management report containing an acknowledgment of management's responsibilities for the financial statements and internal control, a discussion of how these responsibilities were fulfilled, and management's assessment of the effectiveness of the company's internal control. The recommendation indicated that management's assessment should encompass the entire system of internal control, and it called on the organizations sponsoring the commission to cooperate in developing "integrated guidance" on internal control. Although the Treadway Commission did not recommend an auditor's attestation to the management's report, it did state that the Auditing Standards Board (ASB) should provide guidance for the auditor when he or she disagrees with management's assessment on the basis of information gained in the course of the audit of the financial statements.

A project to develop integrated guidance on internal control is being completed by Coopers & Lybrand under the supervision of a committee of the sponsoring organizations of the Treadway Commission (COSO). A revised exposure draft, *Internal Control—Integrated Framework* (COSO 1992), has been issued and includes criteria that can be used to assess the effectiveness of an entity's internal control structure. The following five components serve as criteria for assessing internal control structure:

1. Control environment
2. Risk assessment
3. Control activities
4. Information and communication
5. Monitoring

The exposure draft does not take a position on whether management reports on the effectiveness of internal control should be required or whether auditors should attest to those reports. It does recommend, however, that where such reports are issued they should be restricted to *internal control over the preparation of published financial statements.*

To provide guidance to an independent auditor who is engaged to attest to management's assertions about internal control over financial reporting, the ASB has recently issued an exposure draft of a Proposed Statement on Standards for Attestation Engagements (SSAE) titled, *Reporting on an Entity's Internal Control Structure Over Financial Reporting* (AICPA 1992). This proposed attestation standard defines an entity's internal control over financial reporting as "those policies and procedures that pertain to an entity's ability to record, process, summarize, and report financial data consistent with the assertions embodied in either annual financial statements, interim financial statements, or both."

The Canadian Institute of Chartered Accountants (CICA) also has undertaken a project to develop criteria for internal control to be used by auditors, management, and regulators. In August 1991, the CICA released a paper

titled, *Assessing the Effectiveness of Management Control—A Systems Perspective* (CICA 1991) as an exploratory step toward examining the potential of the systems perspective for assessing the effectiveness of internal control. Similar to the COSO project, the objective of the CICA project is to develop comprehensive internal control criteria.

Prior Research

Only a few studies have examined issues related to management reports on internal control and auditor attestation of such reports. Wallace (1981) reports that there were 950 negative responses to the SEC's 1979 proposal for a management report on internal control. She provides an analysis of the SEC's position through literature citations, market evidence, and survey findings. Wallace's analysis points out that there are two major flaws in the position of the SEC on the value of reporting on internal control: (1) reliable financial statements are possible in spite of inadequate controls, and (2) evidence exists that the cost of such reporting exceeds the benefits.

The first flaw points out that the SEC's contention that an effective system of internal accounting control is necessary to produce reliable financial statements is contrary to current auditing practice. Under current auditing standards the auditor is not required to audit the entity's internal control structure. The auditor can choose not to rely on internal control and perform a substantive audit. Wallace (1981) points out that a review of filings with the SEC showed only ten companies receiving qualified opinions or disclaimers for inadequate internal control systems.

Second, the evidence indicates that the costs of management reports on internal control accompanied by auditor attestation is likely to exceed the benefits. Wallace (1981) reports that market forces have led to attestation reports in only two public companies' annual reports. This suggests that there is little demand (i.e., benefits) for such reports. Wallace (1981) also suggests that the SEC's focus on actual costs excludes a number of relevant cost factors. She reports elsewhere that preparers and users believe that audit costs will increase by 30 percent if such reporting is required (Wallace 1982b).

Wallace (1982a) surveyed a number of user and preparer groups regarding internal control disclosure policies including issues related to reporting on internal control. In general, there were a number of significant differences between the user and preparer groups regarding control policies judged to be material weaknesses. For example, the producer group judged the absence of adequate bonding of employees to be more negative than the user group.

The groups were also asked to rank their preference for the form of internal control reports. There were considerable differences in the groups' preferences. Two examples will illustrate the differences. First, commercial

lending officers preferred an opinion on internal control with materiality limits more than the other user groups. Similarly, CPAs were the group most opposed to an auditor's report on internal controls without materiality limits. Second, mutual fund officers and commercial lending officers preferred the use of a management letter-type disclosure, whereas boards of directors, CPAs, and controllers were opposed to this form of reporting. On the basis of the analyses of the survey data and written comments by the respondents, Wallace (1982a) concluded there was a general attitude that reports on internal control should not be made available.

Auditor Attestation to Management Reports on Internal Control

The Pro Side

There may be potential benefits to auditors from attesting to management reports on internal control. This section attempts to outline arguments that support auditor attestation. This type of service is new to the profession and auditors may be reluctant to consider the potential favorable outcomes from providing such services.

The Demand for Auditor Attestation. On the basis of initiatives of Congress, the SEC, and some members of the accounting profession, an argument can be made that each of these groups sees merit in management reports on internal control. In 1989, 25 percent of all public companies and 60 percent of the Fortune 500 companies included management reports in their annual reports to stockholders (COSO 1992). The majority of these published management reports addressed management's responsibility for internal controls over external financial reporting, along with a number of other assertions.

The initiatives for auditor attestation of management reports, however, are mixed. As described earlier, the Cohen Commission and the SEC's 1979 proposal called for auditor attestation of management reports. The SEC's 1988 proposal did not include a requirement for auditor attestation but requested comments on its desirability. The FDIC Improvement Act requires that the auditor attest to management's report on the financial institution's internal control system. Finally, the current COSO document does not take a position on whether management reports or auditor attestation of those reports should be required.

In the absence of a regulatory requirement for auditor attestation of management reports, why would a company see a need for such services? One possible reason is that the auditor's attestation will add value to management's assertions about internal control. From an investor point of

view, the auditor's attestation provides an opinion about the reliability of the *process* that generated the financial information. This can be viewed as an extension of the auditor's monitoring of the agency relationship that exists between the managers and the absentee owners of the company.

The Public Interest Argument. Currently, generally accepted auditing standards (GAAS) do not require an auditor to test the reliability of a company's internal control structure. Under Statement on Auditing Standards (SAS) No. 55, *Consideration of the Internal Control Structure in a Financial Statement Audit*, the auditor needs only an understanding of the internal control structure sufficient to plan the audit. The remaining audit effort can focus on testing the ending financial statement balances.

Hooten and Landsittel (1991) have argued that this focus on financial results, and not the process that generated the results, does not meet the public's interest. They argue that the public wants more information on "early warning signals" of potential business problems, and that controls are critical indicators of a business's future success. Hooten and Landsittel (1991) further claim that investors are interested in knowing whether companies are in control or not. It might be argued that many of the recent financial scandals (e.g., Miniscribe, ZZZZ Best, and the S&Ls) are examples of companies that were out of control. Auditors can add value by helping to identify increased business risks that are present in poorly controlled companies.

Client and User Expectations. One reason why there may be a lack of demand for reports on internal control is the client and user assumption that they are receiving assurances from the auditor on the entity's internal control structure. One of the primary motivations for revising the standard auditor's report was to clarify what an audit involves. Note that the scope paragraph makes no mention of the extent of work performed on the client's internal control structure. As a result, it is possible that clients and users assume that an audit provides assurance on the reliability of the entity's internal control structure. As an example of such an interpretation, one of the board of director respondents in Wallace's (1982a) study commented that "The auditor's certificate is all the reassurance needed."

The Con Side

There may be some benefits derived from auditor attestation to management reports on internal control. This is not sufficient reason, however, to endorse broad proposals without considering the usefulness of the information to users, and the relationship between the cost and benefits of attestation. This section presents arguments against auditor attestation of management reports on internal control.

The Demand for Auditor Attestation. It is difficult to evaluate the demand and, thus, the usefulness of a service that is not currently being provided on a broad scale; however, one important indicator of usefulness is the existing demand for that service. For example, before the passage of the Securities Acts of 1933 and 1934, most public companies were issuing audited financial statements. According to *Moody's Manuals*, 82 percent of the firms traded on the New York Stock Exchange were audited by CPAs in 1926 (Benston 1969).

The demand for auditor attestation to reports on internal control has not paralleled the demand for attestation to financial statements, despite the fact that a framework for attesting to internal control has existed for some time. SAS No. 30, *Reporting on Internal Accounting Control* (AICPA 1980), established a framework for auditor attestation to internal accounting control (i.e., those controls with the broad objectives of providing management with reasonable but not absolute, assurance that assets are safeguarded from unauthorized use or disposition and that financial records are reliable to permit the preparation of financial statements). The first Statement on Standards for Attestation Engagements, *Attestation Standards* (AICPA 1986), issued in March, expanded the SAS No. 30 framework. This statement provides a broad framework for expansion of attest services beyond the expression of opinions on financial statements. Under this standard, the auditor may express an opinion on management's assertions about internal control using any appropriate concept provided that—

- The auditor has adequate knowledge in the subject matter of the assertion.
- The assertion is capable of evaluation against reasonable criteria that have either been established by a recognized body or are stated in the presentation of the assertion in a sufficiently clear and comprehensive manner for a knowledgeable reader to be able to understand them.
- The assertion is capable of reasonably consistent estimation or measurement against the criteria.

Despite the existence of these standards, there has been little demand for auditor attestation to reports on internal control. Reports on internal accounting control prepared in accordance with SAS No. 30 are rarely encountered. One might argue that this lack of demand is related to the lack of a well-developed criteria for evaluating internal controls beyond those related to financial reporting. However, it would be hard to argue that generally accepted accounting principles were very well developed as criteria for financial statements in the 1920s.

Generally, the demand for reports on internal control has come from regulators, and the reports primarily cover only a segment of the entity's internal control structure. Examples include reports on internal control over:

- Safeguarding customers' cash and securities by broker/dealers and stock clearing companies.

- Managing federal financial assistance programs by entities that receive federal financial assistance.
- Financial reporting by large financial institutions.

Some of these reports are based on the work performed in auditing the entity's financial statements with no additional testing of internal controls required. Others are based on special studies requiring the performance of additional procedures.

What creates this demand for auditor attestation to reports on internal control for regulators? Regulators have an oversight function that allows them to influence directly the entities under their jurisdiction. If regulators believe the entity's internal control system is deficient, they may take steps to compel management to improve the system. Regulators may withhold funding, apply sanctions, or even cause the entity to cease operations. The information and assurances provided in auditors' reports on internal control assist the regulators in meeting their responsibilities. Such assurances cannot be derived from the auditors' reports on financial statements. Also, attestation requirements designed for regulators, by regulators, are likely to be cost effective, because they can be tailored to the regulator's specific needs.

The Cost and Benefits of Auditor Attestation. In considering a requirement for auditor attestation to management reports on internal control for the investing public, it is important to examine what will be achieved (i.e., benefits) by the assurances provided by the reports.[2] A traditional argument for requiring attestation of management reports on internal control is that this service will encourage businesses to improve their internal control structure, resulting in increased reliability of the annual and interim financial reports of the companies. However, auditors already directly attest to annual financial statements. If additional assurance is needed about the reliability of interim financial information, auditors could be required to attest to that information. Providing assurances about the output of a system would appear to be more cost effective than providing assurances about the process used to generate that output.

Another argument for auditor attestation to management reports on internal control in this setting stems from a belief that such reports would provide an "early warning system" for the financial health of businesses. Underlying this argument is a presumed association between the financial

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[2] Consideration of the cost and benefits of additional reporting requirements is especially important given the status of international securities markets. The high cost of complying with the SEC filing requirements has already been identified as a factor that has diminished the ability of the United States to compete as a capital market (Fleming 1991).

health of a business and its system of internal control. If a broad concept of internal control that includes both financial and operational controls is considered, the presumption of an association is reasonable. However, it is doubtful that this association is close to perfect; it is difficult to believe that a control system, no matter how comprehensive, could completely eliminate bad business judgments. If only financial reporting controls are considered, it becomes more difficult to argue a strong association between the quality of internal control and financial health of the business. Without a strong association between the internal control structure and the financial health of the business, attestation by auditors could create an expectations gap that will far surpass any that the profession has experienced to this date.

Individuals (Hooten and Landsittel 1991) who advocate reporting on internal control as an early warning system really appear to be advocating it as a way to communicate information about business or investment risk. Again, management reports appear to be an indirect method of communicating this risk. If financial reporting is deficient in this respect it may be better to improve the disclosures of business risks and uncertainties in financial statements.[3] Financial forecasts could even be required, and the auditor could attest to any of this information directly.

Another issue that arises when considering a requirement for auditor attestation to management reports on internal control is the user's ability to use the information provided by management reports. An important factor that will affect the usefulness of the information is the form of the report. If the reports are standard in form and assert that no high-level control weakness (e.g., material weakness) exists, it is doubtful that there will be much information content in the reports. For example, consider the communications that were required under SAS No. 20, *Required Communication of Material Weaknesses in Internal Accounting Control* (AICPA 1977). That SAS required auditors to communicate to boards of directors or audit committees deficiencies in internal control that were considered to be material weaknesses. Because the information content of such reports was considered to be inadequate, the ASB issued SAS No. 60, *Communication of Internal Control Structure Related Matters Noted in an Audit* (AICPA 1988), which requires communication of reportable conditions, a lower-threshold weakness in internal control. The fact that a material weakness in internal accounting control constitutes a violation of the Foreign Corrupt Practices Act further complicates the use of that threshold of reporting. Finally, if the reports cover both financial and operating controls, there is

[3] The American Institute of Certified Public Accountants (AICPA) recently formed a special committee on financial reporting to suggest ways to improve the nature and extent of information provided to users of financial statements. A part of this committee's charge is to evaluate the range of information and assurances that could be made available (AICPA 1991).

the problem of defining the concept of a material weakness for controls that do not relate directly to financial reporting.

If management reports on internal control are of a "free form," similar to Management's Discussion and Analysis required in filings with the SEC, the reports may have additional information content. But how will an investor use this information? Presumably, management will have some rationale for deciding to accept certain weaknesses in internal control. For example, management may decide to invest available funds in research and development as opposed to internal control. Management should be in the best position to assess the risks and uncertainties of the business and make cost-benefit judgments about the nature and extent of appropriate internal controls for the business. Investors do not have the options available to regulators; they cannot directly influence management. Investors can only make buy or sell decisions based on the information about investment risk and return that is available to them. It is hard to believe that investors can effectively factor information about weaknesses in internal control into their investment risk assessments. Therefore, management reports on internal control in any form would be of questionable value to typical financial statement users.

Concluding Comments

In this paper, we reviewed the history of management reports on internal control and auditor attestation to those reports. We cited arguments both for and against auditor attestation of management reports. Regardless of the reader's point of view on this issue, we feel that some systematic research effort should be undertaken to examine the issues raised in this paper. Based on the recent FDIC legislation, it seems likely that further legislative or regulatory actions are possible. The profession can best react to these demands if all the issues are properly understood based on objective consideration and relevant research findings.

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Illegal Acts— The Current Position of the United Kingdom

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An exposure draft on "The auditor's responsibility in relation to illegal acts" was issued in the United Kingdom in October 1990. Responses from the profession indicated concern that the draft might extend the auditor's responsibility too far. The new Auditing Practices Board (formed in April 1991) is now considering how to proceed with this topic. Issues include the auditor's responsibility for considering—

- *The entity's compliance with certain laws and regulations.*
- *The impact of potential illegal acts on the true and fair view.*

An important feature is the auditor's common law right in the U.K. (which is also, in certain circumstances, a statutory right) to report directly to third parties where matters of public interest are involved.

Introduction

In 1991 the Auditing Practice Committee (APC) of the United Kingdom was replaced by an Auditing Practices Board (APB). The significance of the change is that nonpractitioners became a major influence—previously, 100 percent of the APC's voting members were auditing practitioners; this percentage has now been reduced to 50 percent. In October 1990 the "old" APC had issued an exposure draft, *The Auditor's Responsibility in Relation to Illegal Acts.* Concern has been expressed at this roundtable that the U.K. exposure draft might take the auditor's responsibility too far. Similar concern was expressed in the comments on the exposure draft received from professional firms. However, it remains to be seen how the "new" APB responds to these practitioner concerns now that it is responsible for developing the auditing standard on illegal acts.

Audits generally contain a compliance element assuring that the auditee follows certain laws and regulations, and a qualitative element, which in a U.K. company audit setting requires the auditor's judgment on the true and fair view given by the financial statements. The U.K. exposure draft on illegal acts followed this distinction by addressing separately illegal acts that the auditor is concerned with on grounds of compliance alone and those where the auditor is concerned by the effect on the true and fair view. However, it should be remembered that the two categories are not mutually exclusive and some illegal acts may require consideration under both headings.

Compliance

Dealing with the compliance issue, the U.K. exposure draft set out the following detection standard. The auditor must properly plan, perform, and evaluate the audit so that he or she has a reasonable expectation of identifying noncompliance with—

1. Laws and regulations relating to the preparation of the financial statements.
2. Laws and regulations (e.g., the requirement to keep proper accounting records) where the auditor has a legal responsibility to report breaches.
3. Laws and regulations (e.g., relating to dividends and directors' loans) that govern the management of the financial operations of the business.

Other laws, such as those concerned with the environment and with health and safety at work, are not considered sufficiently proximate to the financial records and financial control systems to require the auditor to plan for detection of breaches as part of a compliance audit.

A highly controversial aspect of the exposure draft, particularly in respect to category 3, was a requirement on auditors not only to report details of the breach (unless adequately disclosed in the financial statements), but also to report the fact that the transaction concerned was, or might be, illegal. Thus, for example, the auditor might highlight the illegality of a loan to a director. Most of the professional firms, in their comments on the exposure draft, argued that judging the legality of such a transaction was a matter for the courts and not the auditors to decide. It is probable that the APB will accept the arguments of the professional firms on this matter.

The True and Fair View

In the exposure draft, it was stated that the auditor's responsibility with respect to illegal acts that could have consequences material to the true and

fair view was to be aware of laws and regulations having a fundamental effect on the entity's operations and to design the audit to give a reasonable basis for concluding that there are no material misstatements in the financial statements as a result of breaches. The exposure draft explained that the auditor assesses the risk of any material misstatements arising from an illegal act and designs the audit work accordingly. Thus, the audit is designed to provide positive rather than negative assurance based on set procedures.

Illegal acts that could have consequences to the true and fair view include breaches that have a material affect on financial statement numbers or that establish a material contingency. For example, failure to observe planning consents could affect the valuation of a property development, whereas failure to observe environmental laws could establish a contingent liability. Comments on the exposure draft expressed concern that such breaches, although creating contingencies material to the true and fair view, might be isolated events not capable of detection without extensive audit work. Serious doubts were expressed as to whether such audit work was justified in cost-benefit terms.

The exposure draft also required the auditor to consider illegal acts that are "significant to an understanding of how the entity is managed." The concern here was to detect and disclose situations where breaching the law is part of the strategic thinking of management so as to gain a commercial advantage over law-abiding competitors, or is deemed necessary to keep up with non-law-abiding competitors or foreign competitors not subject to the same restrictions. Once again this requirement was objected to by professional firm commentators. Nevertheless, if the true and fair view is about understanding the financial performance and position of the business, a key question is whether financial performance can be understood properly without an appreciation that a material amount of the profit derives from or is conditional on, activity that breaches the law. The exposure draft was uncompromising on this issue. Where the true and fair view is affected, the auditor should not refrain from qualifying the report because of potential adverse consequences to the client's business as a result of disclosure.

Public Interest Reporting

Public interest reporting has existed in the United Kingdom for a long time, but it is understood that there is no parallel in the United States and it, therefore, may be of interest to the roundtable. Confidentiality is an implied term of the auditor's contract but it is not an absolute requirement if there are serious matters of public interest. The exposure draft clarified the matters to be considered by the auditor when deciding whether or not to disclose an illegal act in the public interest. Primarily the auditor needs to

weigh the public interest in confidentiality against the public interest in disclosure to a proper authority. The detailed considerations set out in the exposure draft include:

- The relative size of the amounts involved and the extent of the likely financial damage.
- The extent to which the illegal act is likely to affect members of the public.
- The extent to which the nondisclosure of the illegal act is likely to enable it to be repeated with impunity.
- The gravity of the matter.
- Whether there is a general management ethos within the entity of disregarding the law and regulations.
- The weight of evidence and the degree of the auditor's suspicion that an illegal act has been committed.

It should be noted that reporting in the public interest is *ad hoc* and at the auditor's initiative. The auditor receives the protection of qualified privilege (he or she cannot be sued) provided the report is in good faith and to a proper authority. There is no *requirement* for the auditor to report in the public interest. It is an option that the auditor *may* use. Of course, if the auditor does not use the facility he or she may have to justify this decision at a future time, if the problem surfaces in the public domain.

The principle of public interest reporting is recognized within U.K. common law and appears to be accepted by practitioners in the United Kingdom, but there is little evidence as to how often, and for what purpose the facility is being used. As far as the other issues discussed in this paper are concerned, the APB has yet to decide how to respond to the objections of practitioners to the exposure draft.

Special Reports on Regulated Financial Institutions

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Appropriate auditor responsibility for evaluating and reporting on uncertainties, including the going concern status of a client, has long been debated. Most recently, Statements on Auditing Standards (SASs) No. 58 and No. 59 were issued and deal with this area. In this paper we discuss the historical development of auditor responsibility for reporting on uncertainties, summarize relevant research, discuss implementation issues, and suggest future research.

In summary, our historical review reveals the increasing extent of formalization of standards on uncertainties in the United States, especially those relating to a client's going concern status. Consistent with the auditing profession's attention to the topic, several studies seem to indicate that investors depend on audit reports to highlight significant uncertainties. Yet especially in the area of going-concern uncertainties, many companies continue to receive a report not modifed for going-concern status the year prior to filing for bankruptcy. In addition, terminology used in the standards (for example, going concern *and* substantial doubt*) may currently be interpreted in various ways by CPAs. Also, a number of difficulties involved in implementing the new standards are presented.*

Introduction

Since late 1989, the Auditing Standards Board (AuSB) of The Canadian Institute of Chartered Accountants (CICA) has had a Task Force on Auditor Communication with Regulators. The Board has just released its first specific guidance in this area—a guideline entitled "Special Reports on Regulated Financial Institutions."[1]

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[1] Auditing and Related Services Guideline: "Special Reports on Regulated Financial Institutions," *CICA Handbook*. Toronto, Canada: Canadian Institute of Chartered Accountants, May 1992.

The objective for this presentation is an overview of the guideline and the events leading up to it, which is organized as follows:

- Some history and background to put the guideline into context
- The major features of a "derivative reporting engagement"
- Some contentious issues
- Plans for further work

History and Background

Regulatory framework

The regulatory framework in Canada includes—

- Corporations legislation (provincial and federal).
- Securities legislation (provincial only).
- Financial institutions legislation (provincial and federal).

Focus in AuSB work

Our focus has been the federal legislation and regulation that governs financial institutions. The institutions subject to federal requirements include—

- Banks, all of which are federally chartered and regulated.
- Insurance companies.
- Loan and trust companies, which are similar to S&Ls in some respects.

Legislation and regulations that include various provisions—

- Requiring an auditor to report certain matters to the regulator as a result of the audit of financial statments.
- Providing for the auditor to carry out specified procedures and report to the regulator.

Events

For many years, there has been a provision in the Bank Act for an auditor to report matters affecting the well-being of a bank. But the failure of some financial institutions (especially two Western Canadian banks) in the mid-1980s focused attention on legislation and regulators and, in turn, focused the attention of regulators on what the auditor could or should do to help the regulator.

The CICA Commission to Study the Public's Expectation of Auditors, June 1988, identified a perception on the part of the public and regulators that—

- Auditors know a lot about an entity (financial health, operations, quality of management) that is not reflected in the statements.

- Auditors should tell them what they know (based on a GAAS audit—no expectation of extending the auditor's work beyond this).

These expectations are now being reflected in legislation and regulations as they are revised and brought up-to-date. Auditors had (and have) real concerns about this type of reporting.

The guideline is only a first step and—

- Highlights the special reporting responsibilities for auditors and makes auditors aware of the implications of these responsibilities.
- Provides general purpose guidance (not a case-by-case approach) and encourages consistency in the approach taken by auditors.
- Provides a focus for continuing discussion between the CICA, auditors, and regulators.

CICA Guideline, May 1992—Special Reports on Regulated Financial Institutions

The guideline deals with two types of reporting: derivative and non-derivative.

Derivative reporting is described in the guideline as circumstances in which—

- There is a requirement in legislation for the auditor to communicate in writing transactions or conditions relevant to the matters specified in legislation that come to the auditor's attention.
- The auditor does not have a responsibility to carry out procedures to search out relevant transactions or conditions. It is a "by-product" of the financial statement audit.
- The auditor is not required to provide any form of assurance on the matters specified in legislation.

Matters on which derivative reports are required include—

- Any situations or transactions leading the auditor to believe that the financial institution has not adhered to sound financial practices
- A situation where the auditor has reasonable grounds to believe that the circumstances of the financial institution have changed, are changing, or are likely to change in a way that does, or might, materially and adversely affect the viability of the financial institution
- Any transactions or conditions affecting the well-being of the financial institution that, in the auditor's opinion, are not satisfactory and require rectification

In contrast, a nonderivative reporting responsibility is described in the guideline as—

- A reporting engagement separate from the audit of the financial statements.
- The requirement that the auditor carry out procedures relating to matters specified in legislation or by a regulator pursuant to a statutory provision enabling the regulator to require such a report.
- Procedures in addition to those carried out to form an opinion on the statements.

Nonderivative reporting responsibilities can include the following characteristics:

- The auditor may be required to provide an opinion on specific matters, without an assertion from management.
- The auditor may be required to report directly to the regulator.
- The matters are often subjective and, thus, open to different interpretations, and the auditor may not have generally accepted criteria against which to evaluate the matters.

The remainder of the presentation deals with "derivative reporting."

Derivative Reporting Engagement

Some Characteristics

1. The auditor would not perform auditing procedures in addition to those carried out in the normal course of the financial statement audit. For example, the auditor would normally not be required to make separate inquiries of management or obtain additional representations specifically relating to the matters on which derivative reports are required.
2. However, the auditor will need to take additional time in carrying out a financial statement audit to—
   - Understand the derivative reporting responsibility.
   - Assess the likelihood that transactions or conditions relevant to the matters will be encountered during the financial statement audit.
   - Assess whether transactions or conditions encountered should be included in a derivative report.
   - Discuss findings with appropriate levels of management.
   - Prepare the derivative report.
3. The auditor's objective is to—
   - Understand and clarify the derivative reporting responsibility.
   - Make all the relevant parties aware of it.
   - Issue a report if any reportable transactions or conditions are encountered.

4. General and subjective terms are often used in legislation. This may lead to varying interpretations of the matters specified in legislation and thus, to inconsistencies in the types of transactions or conditions identified and reported by auditors.
5. Until guidance is developed on reportable transactions or conditions for derivative reports, each auditor will need to—
   - Obtain an understanding of the types of transactions or conditions that may be of interest to the regulator.
   - Assist the regulator in understanding what can be reasonably expected from a derivative report.
6. To obtain this understanding, the auditor should determine whether the regulator has interpreted, or is willing to interpret, the matters specified in legislation. The auditor should consider discussing the matters specified in legislation with the regulator to determine if agreement on their interpretation can be obtained. If this is not practicable, the auditor should interpret the matters by referring to the CICA Handbook, other available guidance, knowledge of industry practice, and experience gained with the particular financial institution.
7. Clearly, there are limitations in the usefulness of derivative reports:
   - The auditor cannot conclude that all relevant transactions or conditions were encountered during the financial statement audit.
   - When there is no comprehensive and precise interpretation of the matters on which derivative reports are required, there will likely be inconsistencies with respect to the types of transactions or conditions identified and reported by different auditors.
   - In certain instances the nature of the matters on which derivative reports are required may lead the auditor to conclude it is unlikely that relevant transactions or conditions will be encountered because a financial statement audit is not designed to address such matters.

The Report by the Auditor

The report by the auditor is titled, "Derivative Report by the Auditor," and is addressed to the party specified in the legislation. It would require the auditor to do the following:

- State that an audit of the financial statements was carried out.
- State the purpose of the report.
- Identify any interpretation of the matters specified in legislation.
- Describe the transactions or conditions encountered, or state that no relevant transactions or conditions were encountered.

- State that no additional procedures have been carried out in addition to those necessary to form an opinion on the financial statements.
- When applicable, say it is unlikely that transactions or conditions relevant to the matters would be encountered because a financial statement audit is not designed to address such matters.
- When transactions or conditions are reported, state that—
  - They have been discussed with management.
  - No attempt has been made to determine whether other transactions or conditions of this nature have occurred.

Timing for reporting could vary according to the legislation. For example, it may be required without undue delay after identification of a relevant item or may be required after completion of the audit.

For an example of a derivative report, see the Appendix.

Contentious Issues

The following are contentious issues:

- The fact that *no* additional auditing procedures are necessary
- How to express the limitations in the usefulness of the report without—
  - Casting doubt on the value of a financial statement audit
  - Making the report so negative that it appears to be useless
- Auditor difficulty in identifying matters and transactions that should be reported
- An auditor's dilemma—if the auditor reports significant matters to the regulator, what are his or her responsibilities to the shareholders?
  - Financial regulator: tell me what you know and I'll "manage" the situation
  - Securities regulators: the shareholders (and the market) have a right to full, true and plain disclosure

Action Now

The CICA Auditing Standards Board identifies appropriate criteria for matters to be reported in a derivative reporting engagement (released in November 1992). The key here is the concept of "matters affecting the well-being of the financial institution." The Board addresses one particular nonderivative reporting requirement in a piece of provincial legislation (released late in 1992). The Task Force on Auditor Communication with Regulators will maintain contact and continue discussions with the regulators.

Appendix

Examples of situations in which derivative reports are issued:

1. Legislation specifies the report is to be addressed to the chief executive officer of the financial institution and a copy is to be sent to the regulator.
2. The auditor has interpreted the matters.
3. The auditor has concluded it is likely that transactions or conditions relevant to the matter would be encountered during the financial statement audit.
4. There are no transactions or conditions to be reported.

DERIVATIVE REPORT BY THE AUDITOR

To the Chief Executive Officer of X Financial Institution:

I have audited the financial statements of X Financial Institution as at December 31, 19X1 and for the year ended, and reported thereon under date of February 19, 19X2.

Pursuant to the requirements of Section XXX of the Y Act (the Act), I am required to report to you any transactions or conditions encountered during the aforementioned audit that (describe matters specified in legislation). For the purposes of understanding the types of transactions or conditions that (describe matters specified in legislation), I have used the following interpretations developed from the following sources:

[*Describe the interpretations used and the sources of such interpretations.*]

During the course of the aforementioned audit, based on the interpretations referred to above, I encountered no relevant transactions or conditions.

No procedures have been carried out in addition to those necessary to form an opinion on the financial statements.

This report has been prepared in accordance with the applicable Auditing and Related Services Guideline issued by The Canadian Institute of Chartered Accountants, and is to be used soley to satisfy the requirements of Section XXX of the Act and should not be referred to or used for any other purpose.

City
Date (signed)________________
Chartered Accountant

cc: Superintendent of Financial Institutions

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