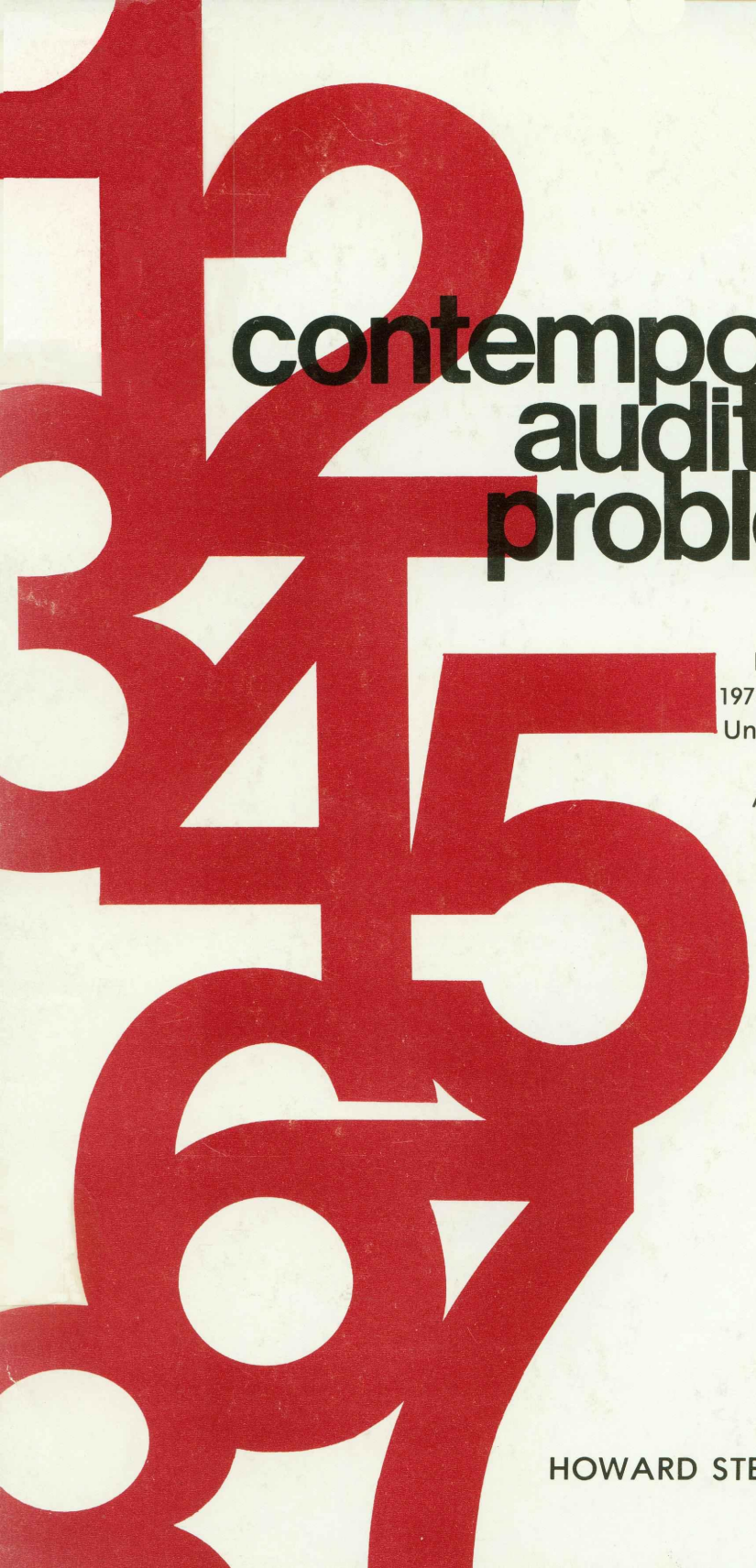
1974

Contemporary auditing problems: Proceedings of the Touche Ross/University of Kansas Symposium on Auditing Problems

University of Kansas, School of Business

Howard Stettler



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1974 Arthur Andersen
University of Kansas
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Auditing Problems

HOWARD STETTLER, EDITOR

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Edited by

Howard F. Stettler

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Preface

In 1972 the School of Business of the University of Kansas was privileged to present the first of what it was hoped would become a biennial series of symposia on matters of concern to practitioners and educators involved in the field of auditing. The 1974 Arthur Andersen/University of Kansas Symposium on Auditing Problems bears testimony that the hoped-for emergence of such a series has become a reality. Important features of the first symposium were maintained in 1974:

1. Limitation of the subject matter to technical and professional concerns related to the practice of auditing. The subdivision of auditing practice that is concerned with financial accounting standards was excluded in recognition of the extensive attention already being devoted to that vital topic.

2. Maximization of the interaction between practitioners and educators by having (with one exception) the designated discussant of each paper selected from the alternate sector of auditing, and by having the invited participants equally divided in terms of their primary concern with either auditing practice or auditing education.

3. Preparation of all papers (but not the evening address) in advance, with distribution to all participants, so that after brief comments by the preparer of the paper, more than an hour was available for the remarks of the designated discussant and the ensuing open discussion by the approximately fifty participants in attendance.

4. Publication of the Proceedings of the symposium, but with no attempt to summarize the informal discussion except that both preparers and designated discussants had full opportunity to modify their papers and remarks as originally presented to reflect ideas that arose during the general discussion.

The selection of topics for the invited papers for the 1972 symposium emphasized future directions of auditing in terms of response to contemporary events, extensions of auditing practice and research, and development of standards in areas such as materiality and statistical sampling. The repeated references in the 1972 discussions to the pervasive problems of auditor independence suggested the topic for the opening paper of the 1974 symposium: an historical analysis of the development of the concept and practice of auditor independence and consideration of proposals for strengthening that vital element of auditing relationships. The historical orientation of the opening papers of both the 1972 and 1974 symposia reflects an intent that has emerged that these and subsequent papers covering aspects of the history and evolution of auditing will eventually provide a comprehensive dissertation on the development and heritage of the auditing segment of the accounting discipline.

Other papers in the present volume examine various controversial questions, ranging from the "sample of one" and standards for confidence levels in sampling, to an examination of the case for mandated independent audits of publicly held companies. A change of pace and an extension of the forward look of the

1972 symposium is evident in the paper setting forth a decision theory model of the audit process.

As was true for the 1972 symposium, I take full responsibility for the selection of topics for the invited papers, but the views expressed in the papers are those of the preparers, and, of course, not necessarily those of the organizations with which they are affiliated. For future auditing symposia, I wish to invite proposals for papers on topics consistent with the general theme of the symposia, and I urge those interested in preparing a paper for a future auditing symposium to contact me in that regard.

The 1974 symposium and the printing of the Proceedings would not have been possible without the financial support of Arthur Andersen & Co. arranged by Robert A. Long, managing partner of the Kansas City office of the firm, alumnus of the University of Kansas, member of the Board of Advisers of the School of Business, and long-time personal confrere.

HOWARD F. STETTLER

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Auditor Independence: Its Historical Development And some Proposals for Research

R. Glen Berryman
University of Minnesota

A 1950 publication of the AICPA, written primarily for readers of audit reports, stated "Independence, both historically and philosophically, is the foundation of the public accounting profession."[1] More recently the same idea has been restated as follows: "Independence has always been a concept fundamental to the accounting profession, the cornerstone of its philosophical structure."[2] Auditors and the users of audit reports then and now would strongly support the above assertion. Independence has been a developing concept, as evidenced by shifts in position as to what constitutes an independent status for the auditor. For example, "strong" rules on independence have been adopted only recently.

The sections that follow review the historical development of auditor independence and note the need for the presence of its various aspects in connection with the attest function. Specific proposals for research are developed, with emphasis being placed on user perceptions of independence.

English Backgrounds

An early concern for independence is noted in the English *Companies Clauses Consolidation Act of 1845,* Section 102, which stated:

> Where no other Qualification shall be prescribed by the special Act, every Auditor shall have at least One Share in the undertaking; and he shall not hold any Office in the Company, nor be in any other Manner interested in its Concerns, except as a Shareholder.

The requirement of shareholding, however, has not been retained in Britain as an auditor qualification as evidenced by the *Companies Act of 1862,* which permitted but did not require shareholding, and by subsequent Companies Acts. The provision against auditors serving as officers or employees of their auditees appears to have been maintained continually in the British system. The English *Companies Act of 1948* in Section 161 provided that no person who is ". . . an officer or servant of the company"; or is ". . . a partner of or in the employment of an officer or servant of the company"; is qualified for appointment as auditor of such company.

The relationship of the auditors to the shareholders was established in the same 1845 English statute noted above. At the first meeting of a company after passage of that 1845 statute, the auditors would be elected by the shareholders.

Further, Section 118 of that Act directed that the shareholders be provided with the report of the auditors. The *Companies Act of 1900,* Section 21, provided that if an auditor was not appointed at the annual general meeting of the company, the Board of Trade would, on written application of any member of the company, appoint the auditor for the year and fix his remuneration. The *Companies Act of 1929,* Section 134, provided that the auditors were entitled to attend any general meeting of the company at which any accounts that they had examined or had reported on were to be presented and, further, that they were entitled to make any statement or explanations which they wished to make. Continued concern with auditor independence is evidenced by the *Companies Act of 1948.* Section 160 of that Act provided that a special annual meeting notice would be required for either the appointment of an auditor other than a retiring auditor or nonappointment of the retiring auditor.

Developments in the U.S. to 1940

In the United States, independent status for the auditor appears to have emerged slowly as a major concern. Of course, the profession itself did not grow to major size and influence until much later than in Great Britain. The American Association of Public Accountants, established in 1887, did not, in its early years, formally recognize the need for independence in its constitution or bylaws. An amendment to the bylaws adopted in 1907 did recognize the desirability of avoiding incompatible or inconsistent occupations. Recognition of the importance of independence is noted by the following comment of an early practitioner:

> The position of the public accountant in respect to corporations and their management is always an independent one. Unlike the attorney, he is not expected to make out a case. The character of the service he renders is impersonal.[3]

The American Institute of Accountants, formed in 1916, and its predecessor organization did not appear to have been actively concerned with independence until about 1930. A 1928 editorial in *The Journal of Accountancy* demonstrated interest in identifying improper relationships between auditors and their clients. The editor pointed out that an auditor should not be involved as a stockholder, bondholder, officer, or director of the organization he was serving as auditor. He did recognize one exception, namely, a company could appoint an auditor as a director when it was being reorganized. The editor stated:

> The accountant should be so utterly divorced from financial or other participation in the success or failure of an undertaking under audit that no one could ever point an accusing finger, however unjustly, and allege the possibility of bias.[4]

At the 1931 annual meeting of the American Institute of Certified Public Accountants, a proposal was introduced as follows:

> RESOLVED, that the maintenance of a dual relationship, as director or officer of a corporation, while acting as auditor of that corporation is against the best interests of the public and the profession and tends to

destroy that independence of action considered essential in the relationship between client and auditor.[5]

This resolution was referred to the Committee on Professional Ethics, but was not acted upon by the Institute that year.

The following year the Congress of the United States exhibited substantial interest in financial representations supported by an independent review. The *Federal Securities Act of 1933,* Section 77aa, required that certain financial information filed with the Government be certified by an independent certified accountant or public accountant. The *Securities Exchange Act of 1934,* Section 78(1), stated that balance sheets and income statements were to be certified by independent public accountants if such is required by the rules and regulations of the Securities and Exchange Commission. These are the first formal requirements mandating auditor independence.

The Securities and Exchange Commission, under authority granted it by the 1933 Act, adopted the following rule on July 6, 1933:

> The Commission will not recognize any such certified accountant or public accountant as independent if such accountant is not in fact independent. Unless the Commission otherwise directs, such accountant will not be considered independent with respect to any person in whom he has any interest, directly or indirectly, or with whom he is connected as an officer, agent, employee, promoter, underwriter, trustee, partner, director, or person performing similar function.[6]

In 1934, the American Institute of Accountants' Council adopted and the annual meeting approved the following resolution:

> RESOLVED, that no member or associate shall certify the financial statements of any enterprise financed in whole or in part by the public distribution of securities if he is himself the actual or beneficial owner of a substantial financial interest in the enterprise or if he is committed to acquire such an interest.[7]

The SEC rule prohibited *any* interest, direct or indirect, in any person with respect to whom the accountant is alleging independence, while the AIA position focused on "substantial financial interest," and omitted any reference to employment.

In 1936, The Securities and Exchange Commission did amend its rule with respect to independence and adopted the Institute's position prohibiting any *substantial* interest.[8] Shortly after this, the Securities and Exchange Commission in *Accounting Series Release #2,* dated May 6, 1937, discussed briefly the independence of an accountant as follows:

> In response to such requests, the Commission has taken the position that an accountant cannot be deemed to be independent if he is, or has been during the period under review, an officer or director of the registrant or if he holds an interest in the registrant that is significant with respect to its total capital or his own personal fortune.

The Release continued:

> In a recent case involving a firm of public accountants, one member of which owned stock in a corporation contemplating registration, the

Commission refused to hold that the firm could be considered independent for the purpose of certifying the financial statements of such corporation and based its refusal upon the fact that the value of such holdings was substantial and constituted more than 1 percent of the partner's personal fortune.

In the decade of the 1930's, both the Federal government and the public accounting profession adopted the view that auditors should be independent of their clients. The SEC exerted leadership in determining what constituted independence, as evidenced by its issuance of ASR #2. Emphasis was placed on financial interest and on employment by the client of the auditor in capacities other than that of auditor.

Independence: 1940-1955

In 1940, the Institute adopted the following rule on independence as part of its Code of Professional Ethics:

> A member or associate shall not express his opinion on financial statements of any enterprise financed in whole or in part by public distribution of securities, if he is himself the actual or beneficial owner of a substantial financial interest in the enterprise or if he is committed to acquire such an interest; nor shall a member or an associate express his opinion on financial statements which are used as a basis of credit, if he is himself the actual or beneficial owner of a substantial interest in the enterprise or if he is committed to acquire such interest, unless he discloses his financial interest in his report.[9]

This adoption is noteworthy because (1) the financial independence rule first became part of the Code of Professional Ethics and (2) when financials are used for credit purposes, approval was apparently given for an auditor's holding of a substantial financial interest if he disclosed such holding.

In 1942, an amplification of the rule on financial independence was adopted—". . . if he owns or is committed to acquire a financial interest in the enterprise which is substantial either in relation to its capital or to his own personal fortune . . ."[10] This action brought the Institute in line with the SEC's 1937 action in *ASR #2* as to investment, but not with respect to other employment arrangements.

The SEC in *Accounting Series Release #22,* of March 14, 1941, reported an opinion of its Chief Accountant, William W. Werntz, as follows:

> When an accountant and his client, directly or through an affiliate, have entered into an agreement of indemnity which seeks to assure to the accountant immunity from liability for his own negligent acts, whether of omission or commission, it is my opinion that one of the major stimuli to objective and unbiased consideration of the problems encountered in a particular engagement is removed or greatly weakened. Such condition must frequently induce a departure from the standards of objectivity and impartiality which the concept of independence implies.

That same release also cited, with approval, the *Cornucopia Gold Mines,* 1 SEC 364, (1936) decision which held that the certification of a balance sheet prepared by an employee of the auditor who was also serving as an unsalaried but principal

financial accounting officer of the registrant and who was also a shareholder of the registrant was not a certification by an independent accountant.

The SEC in *Accounting Series Release #37,* dated November 7, 1942, indicated that in determining independence, consideration would be given to the propriety of the relationships and practices involved in all services performed for the company by such accountant. *Accounting Series Release #47,* dated January 25, 1944, reported several situations in which non-independence was found, including the following:

1. Both an accountant and a business associate made loans to the registrant. Further, a son of the accountant was an officer of the registrant.
2. The accountant advanced funds to the registrant for financing a new department.
3. The registrant was unable to pay the accountant's fee and the registrant pledged shares of its own stock to assure that such fee would be paid. In addition, it had given the accountant an option to purchase the pledged security at market price at the option date.
4. The accountant was the treasurer and a shareholder of a company which sold some of a registrant's products.
5. The son of a partner was serving as assistant treasurer and chief accountant of a registrant. The son resided with his father.
6. The accountant audited cash reports prepared by the client's staff, entered them in a summary record, posted such data to the general ledger and made adjusting journal entries each month.

The above list provides additional evidence that the SEC wanted to maximize the likelihood of an objective review by prohibiting a significant financial interest or a close personal relationship with the client.

The American Institute of Accountants through its Committee on Auditing Procedure produced a special report in 1947 entitled *Tentative Statement of Auditing Standards; Their Generally Accepted Significance and Scope.* The second general standard stated, "In all matters relating to the assignment, an independence in mental attitude is to be maintained by the auditor or auditors." Independence *in fact* is emphasized in this document, as discussed on p. 17—

> Independence in the last analysis bespeaks an honest disinterest on the part of the auditor in the formulation and expression of his opinion, which means unbiased judgment and objective consideration of facts as determinants of that opinion. It implies not the attitude of a prosecutor, but a judicial impartiality that recognizes an obligation on his part for a fair presentation of facts which he owes not only to the management and the owners of a business (generally, in these days, the holder of equity securities in a corporation) but also to the creditors of a business, and to those who may otherwise have a right to rely (in part, at least) upon the auditor's report, as in the case of prospective owners or creditors.

This position was subsequently affirmed in the 1954 publication *Generally Accepted Auditing Standards.*

In 1950 the SEC revised its rule on independence by deleting the word "substantial" from the phrase "any substantial interest." Thus, the SEC went

back to its 1933 position in which there was a prohibition against the accountant having any direct financial interest in his client. The Institute in January, 1962, some twelve years after the above stated SEC rule revision, moved to prohibit the direct financial interest or material indirect financial interest in an enterprise under audit by the member.[11] During the interim (1950-1962) a double standard as to investment in the client company prevailed—*no* direct financial interest for SEC work and *no substantial* direct financial interest for other engagements. The double standard also existed with respect to employment—*no* employment of the types listed in ASR #2 was permitted for SEC work. The Institute was silent on the matter of other employment of the auditor by the client company.

The concept of independence was being developed and articulated in the 1940-1955 period. Specific rules were adopted to require independence. Though independence in fact was emphasized, the illustrations publicized by the SEC could be interpreted to suggest that the appearance of independence was a major factor in its evaluations of the independence of accountants. Prohibition of an auditor's holding of a financial interest in a client was being established.

Independence: 1956-1973

The membership of the AICPA in January 1962 adopted the following rule on independence as part of its Code of Professional Ethics. ARTICLE 1: *Relations with Clients and Public.*

> 1.01 Neither a member or associate, nor a firm of which he is a partner, shall express an opinion on financial statements of any enterprise unless he and his firm are in fact independent with respect to such enterprise.
>
> Independence is not susceptible of precise definition, but is an expression of the professional integrity of the individual. A member or associate, before expressing his opinion on financial statements, has the responsibility of assessing his relationships with an enterprise to determine whether, in the circumstances, he might expect his opinion to be considered independent, objective and unbiased by one who had knowledge of all the facts.
>
> A member or associate will be considered not independent, for example, with respect to any enterprise if he, or one of his partners, (a) during the period of his professional engagement or at the time of expressing his opinion, had, or was committed to acquire, any direct financial interest or material indirect financial interest in the enterprise, or (b) during the period of his professional engagement, at the time of expressing his opinion or during the period covered by the financial statements, was connected with the enterprise as a promoter, underwriter, voting trustee, director, officer or key employee. In cases where a member or associate ceases to be the independent accountant for an enterprise and is subquently called upon to re-express a previously expressed opinion on financial statements, the phrase, "at the time of expressing his opinion" refers only to the time at which the member or associate first expressed his opinion on the financial statements in question. The word "director" is not intended to apply to a connection in such a capacity with a charitable, religious, civic or other similar type of nonprofit organization when the duties performed in such a

capacity are such as to make it clear that the member or associate can express an independent opinion on the financial statements. The example cited in this paragraph, of circumstances under which a member or associate will be considered not independent, is not intended to be all inclusive.

This rule moved the AICPA closer to the SEC position in that it prohibited direct financial interest in the client and for the first time prohibited specific employment relationships, such as director or officer of a client, during the period of the professional engagement. Independence in fact was emphasized in the first paragraph of this rule, while independence in appearance was specified in the second paragraph.

Effective March 1, 1973, the membership of the AICPA adopted new rules of conduct that included the following:

RULE 101—INDEPENDENCE. A member or a firm of which he is a partner or shareholder shall not express an opinion on financial statements of an enterprise unless he and his firm are independent with respect to such enterprise. Independence will be considered to be impaired if, for example:

A. During the period of his professional engagement, or at the time of expressing his opinion, he or his firm:

1. Had or was committed to acquire any direct or material indirect financial interest in the enterprise; or

2. Had any joint closely held business investment with the enterprise or any officer, director, or principal stockholder thereof which was material in relation to his or his firm's net worth; or

3. Had any loan to or from the enterprise or any officer, director or principal stockholder thereof. This latter proscription does not apply to the following loans from a financial institution when made under normal lending procedures, terms and requirements:

(a) Loans obtained by a member of his firm which are not material in relation to the net worth of such borrower.

(b) Home mortgages.

(c) Other secured loans, except loans guaranteed by a member's firm which are otherwise unsecured.

B. During the period covered by the financial statements, during the period of the professional engagement or at the time of expressing an opinion, he or his firm

1. Was connected with the enterprise as a promoter, underwriter or voting trustee, a director or officer or in any capacity equivalent to that of a member of management or of an employee; or

2. Was a trustee of any trust or executor or administrator of any estate if such trust or estate had a direct or material indirect financial interest in the enterprise; or was a trustee for any pension or profit sharing trust of the enterprise.

The above examples are not intended to be all-inclusive.[12]

RULE 102—INTEGRITY AND OBJECTIVITY. A member shall not knowingly misrepresent facts, and when engaged in the practice of

public accounting, including the rendering of tax and management advisory services, shall not subordinate his judgment to others. In tax practice, a member may resolve doubt in favor of his client as long as there is reasonable support for his position.[13]

The need for the appearance of independence is not stated as it was in the previous Rule 1.01 (. . . he might expect his opinion to be considered independent, objective and unbiased by one who had knowledge of all the facts.) but the listing of the prohibitions and the indication of specific situations which are acceptable strongly urges continued interest in the appearance of independence. It is also interesting to note that some of the previous "Interpretations of Rules of Conduct of the AICPA Division of Professional Ethics" were incorporated in the new *Restatement* publication. Interpretation "101-3—Accounting Services" emphasizes independence in appearance by suggesting that the auditor consider whether he is ". . . lacking in independence in the eyes of a reasonable observer."[14] It is also noteworthy that the 1973 Restatement includes Rule 202 which incorporates expressly generally accepted auditing standards. Those standards include the general standard requiring an "independence in mental attitude," which is independence in fact.

Statement on Auditing Standards #1, dated November, 1972, issued by the Committee on Auditing Procedure of the AICPA, included in paragraph 220.03 the following statement. "To *be* independent the auditor must be intellectually honest; to be *recognized* as independent, he must be free from any obligation to or interest in the client, its management, or its owners." Thus, continued emphasis on independence in fact as well as the appearance of independence is maintained in this document.

The SEC continued to push the development of rules related to independence, as evidenced by its issuing of *Accounting Series Release #81,* December 11, 1958, and *Accounting Series Release #97,* May 21, 1963. In ASR #81, 54 situations were reviewed, 34 of which noted the accountants as "not independent," 19 of which noted the accountants "have not been held to be not independent" and one in which accountants would be independent as to one entity and not independent as to another entity. The SEC in ASR #97 found that a CPA in practice was not independent where he was one of three stockholders and an officer and co-manager of a finance company which made loans to customers and employees of a client who was a registered broker-dealer.

The SEC's primary pronouncement on independence is Rule 2-01(b) of Regulation S-X. That rule, enforced today, states:

The Commission will not recognize any certified public accountant or public accountant as independent who is not in fact independent. For example, an accountant will be considered not independent with respect to any person or any of its parents, its subsidiaries, or any other affiliates, (1) in which, during the period of his professional engagement to examine the financial statements being reported on or at the date of his report, he or his firm or a member thereof had, or is committed to acquire, any direct financial interest or any material indirect financial interest; or (2) with which, during the period of his professional engagement to examine the financial statements being reported on, at the date of his report or during the period being covered by the financial

> statements, he or his firm or a member thereof was connected as a promoter, underwriter, voting trustee, director, officer, or employee, except that a firm will not be deemed not independent in regard to a particular person if a former officer or employee of such person is employed by the firm and such individual has completely disassociated himself from the person and its affiliates and does not participate in auditing financial statements of the person or its affiliates covering any period of his employment by the person. For the purposes of Rule 2-01, the term "member" means all partners in the firm and all professional employees participating in the audit or located in an office of the firm participating in a significant portion of the audit.[15]

It is interesting to note that the SEC rule does not include a distinction between independence in fact and the appearance of independence.

Accounting Series Release #123, March 23, 1972, endorsed the establishment of standing audit committees composed of outside directors as a means of providing "protection to investors who rely upon such financial statements." *Accounting Series Release #126,* July 5, 1972, provided some guidelines for accountants for determining existence or lack thereof of independence. It stated, "The concept of independence, as it relates to the accountant, is fundamental to this purpose because it implies an objective analysis of the situation by a disinterested third party." Examples were provided of situations in which the independence of accountants could be challenged. With respect to management service activities, the Release states . . .

> The basic consideration is whether, to a third party, the client appears to be totally dependent upon the accountant's skill and judgment in its financial operations or to be reliant only to the extent of the customary type of consultation of advice.

As to EDP and bookkeeping services, the Release states . . .

> Systems design is a proper function of the qualified public accountant. Computer programming is an aspect of systems design and does not constitute a bookkeeping service . . . where source data is provided by the client and the accountant's work is limited to processing and production of listings and reports, independence will be adversely affected if the listings and reports become part of the basic accounting records on which, at least in part, the accountant would base his opinion.

As to unpaid fees the Release indicated,

> When the fees for an audit or other professional service remain unpaid over an extended period of time and become material in relation to the current audit fee, it may raise questions concerning the accountant's independence because he appears to have a financial interest in the client . . . normally the fees for the prior year's audit should be paid prior to the commencement of the current engagement.

As to business relationships with clients, the Release suggested that joint business ventures with clients, limited partnership agreements, investments in supplier or customer companies, rental of blocks of computer time to a client (except in emergency or temporary situations) would adversely affect independence.

Accounting Series Release #144, of May 23, 1973, considered the independence of a large firm of public accountants and alleged that they were not independent because partners or employees of accountant's branch office during the time when they were working on the audit of a client, received payments from the general partners of the client company totaling about $17,000, "in the guise of profits from participation in the purchase and sale of "hot issues'."

During the 1956-1973 period, emphasis centered on refining the rules for determination of the existence of independence. The SEC tended to lead the way in establishing guidelines, though substantial efforts were made by the AICPA to clarify the meaning of its ethics and its concept of independence. The appearance of independence was considered critical, though the profession and the SEC remained as "judges" of independence. The AICPA adopted the SEC position on avoidance of *any* direct financial interest in a client.

Aspects of Independence

The purpose of the auditor's representation as to his independence is to develop in users' minds a high level of confidence in his reports. If that confidence with respect to his technical skills and his independence is not present, then the value of the audit report is diminished greatly.

The concept of independence implies freedom from control and domination by another party. It implies impartiality and the absence of bias in the gathering of evidence, interpretation of evidence and opinion formulation. The auditor as an independent party must be willing and be in a strong position to insist on that course of action which his professional judgment urges is the appropriate one in the circumstances.

Independence has a "*time*" component—it must exist for some minimum period of time for each audit situation. An independent state of mind must exist from the time an audit contract comes into existence until the report is rendered and subsequent responses interpreting such report have been given. It seems to be generally agreed that an independent attitude must be maintained from the time that an engagement is undertaken until all audit work, including reporting, is completed.

Independence has a "*party*" component—the auditor must not be under the influence of the client or other party at interest. Aspects of this are reflected by the question raised by a CPA, quoted in a *Forbes* article, "Since auditors are selected and paid by management, are they truly independent?"[16] This raises a series of issues, including: (1) Who should select the auditor? (2) Who should make the decision to change auditors? (3) Who should pay the audit fee? and (4) With respect to what parties should the auditor be independent?

Independence has a "*what*" component. Carey has stated:

> Independence has three meanings to the certified public accountant. First, in the sense of not being subordinate, it means honesty, integrity, objectivity and responsibility. Second, in the narrower sense in which it is used in connection with auditing and expression of opinions on financial statements, independence means avoidance of any relationship which would be likely, even subconsciously, to impair the CPA's objectivity as auditor. Third, it means avoidance of relationships which to a reasonable observer would suggest a conflict of interest.[17]

Mautz and Sharaf suggest, "Three phases of independence are important to independent auditing. First is the independence of approach and attitude . . . The second phase . . . freedom from bias and prejudice, . . . The third phase . . . to separate the two divisions (auditing and other services) of public accounting . . ."[18] Questions could be asked such as (1) How important is the appearance of independence? (2) Can independence in fact be measured? and (3) What relationships should be avoided?

Independence has a "*How* shall it be maintained?" component. This raises questions such as (1) Who shall judge whether it has or has not been maintained? (2) What procedures should be adopted to provide assurance to users that independence has been maintained? and (3) What operational tests shall be applied by reviewers to detect a lack of independence?

Selection, Payment and Change of Auditors

The user group for audit service now includes at least management, creditors, the current shareholders, prospective shareholders, employees, and governmental units. External users in general have a strong desire for the auditor to take an impartial and unbiased approach to his work.

The auditor's role can be likened to that of a judge, who listens to the charges or petitions, hears the arguments, evaluates the evidence presented and its bearing on the issues, considers the legal rules that are applicable, reasons to a conclusion and renders an opinion indicating his findings and their underlying rationale. But audit practice differs somewhat. The auditor collects his own evidence rather than rely on the two or more parties in the case to each collect evidence and present it in an adversary proceeding. Also, no cross examination is provided for in auditing. On the other hand, the public accountant must be aware of the underlying rules, must reason to a conclusion and must render an opinion as does the judge.

Who should select the auditor? The parties in a legal action do not make the final determination as to what judge will hear the case nor what jurors will be called. Would the user's view of auditor independence be strengthened by having auditors appointed by a governmental authority (e.g., an equivalent to the English Board of Trade)? Some companies have audit committees composed of outside directors. Does this arrangement, as far as it is related to selection of auditors and communications with the auditors, increase perceived independence?

Who should pay the auditor? A judge receives his "fee" in the form of salary from the state, whereas the auditor receives his fee from his client and the auditor has some control over the size of the fee. Is this arrangement on audit fees one that should be continued or do the users perceive this arrangement as one which impairs the auditor's independence?

On what basis should public accounting firms accept new clients? At the present time, each firm adopts its own criteria for acceptance of new engagements. Consideration could be given to the question of whether independence with respect to any existing client would be affected adversely by the acceptance of a new client.

When should auditors be changed? What internal or external changes in relationships might have an effect on independence? What relationships between

auditor and client could impact independence? For example, would the hiring by the client of several audit staff members have a negative impact? Who should be responsible for detecting such changes and then urging and or making a change in auditor?

A number of questions have been asked above, and no answers appear to be readily available. Research could well be undertaken to ascertain user and auditor views on each of the above, including their implications for the behavior of the auditor under varying sets of circumstances.

What Constitutes Independence?

Independence in appearance has received attention in the literature. It involves the perception of the auditor's independence by parties interested in audit reports. From the standpoint of the external user, every judgment made by the auditor has an independence aspect. Such judgments include but are not limited to his search for clientele, staff hiring, assignment of staff to the engagement, approach to his audit investigation, evaluation of evidence, and development of his opinions. If any judgment appears to involve compromise, even though of apparent minor import, subordination may be alleged and perceived independence may be questioned. For example, the decision to omit a confirmation of a specified receivable or auditor acquiescence to the change in the wording of a footnote could give rise to a feeling by a user that the auditor's judgment was subordinated.

How can auditors be assured that users have a high level of confidence in their independence? The perception of the user must certainly be taken into account. How do we measure the reader's perception of independence? Perhaps some measuring instrument[19] could be developed such that the profession as a whole could monitor user pulse. Deterioration of the level of perceived independence could then be attacked by the profession in a variety of ways, such as proscriptions as to activities felt by the user to be impinging on independence and education of the users as to the "real" state of auditor independence. Different users and different groups of users may have different concepts of what constitute independence and "how much" independence is essential. The differences or even conflicts in view points could present difficulties as well as could attempts to develop recommendations for actions to raise the level of perceived independence.

There has been little emphasis placed on the determination of what attributes create independence in fact. Independence in fact seems to require absolute intellectual honesty and the absence of obligation to any potential user.

Professor Barrett has indicated that ". . . the audit profession's ethical notion of apparent independence can be operationally defined as a sociological role construct, and . . . its conception of real independence can be operationally defined as a personality construct."[20] He suggests that:

> *Professional Audit Independence* contains two constructs. *Interpersonal Independence* describes functional situations which promote or dysfunctional situations which impair the profession's auditor image as perceived by reasonable observers . . . *Intrapersonal Independence* is the second order factor containing three operational content variables. It is assumed that male individuals—who are field analytical rather than

> global field types, who evidence a low social approval need rather than being approval motivated and who prefer to describe themselves in terms of independent rather than intermediate or dependent personality typologies—tend to possess a high degree of intrapersonal independence as characterized by their behavior in test and non-test situations.[21]

Professor Barrett goes on to indicate that, in his opinion, on the basis of exploratory studies, interpersonal and intrapersonal independence can both be determined by means of empirical testing. Additional research in this area, largely untouched to date, seems warranted.

What relationships should be avoided? At a recent bank's annual meeting, a minority shareholder sharply criticized a $1,600,000 loan by the bank to the company's auditors on the ground that such was a "conflict of interest and jeopardized the independent status of the auditor."[22] Many public accounting firms are strongly interested in "selling" management services. Might not the user of an audit report suspect a tradeoff between the accounting firm and its client on the basis that the audit might be reduced in scope or a disclosure requirement changed if the particular management service was "purchased"? As related earlier, the SEC has indicated in various releases situations where independence is questioned No comprehensive research appears to have been undertaken on this question. A substantial pay-off should be obtainable from a comprehensive research project covering satisfactory and unsatisfactory relationships, particularly if user views are taken into account in the project.

Maintenance of Independence

What party or parties should assess the presence or absence of independence? To date, the public accounting profession and the Securities and Exchange Commission have been the formulators of the rules regarding independence and also the enforcers of such rules. The view of the SEC can be presumed to reflect their perception of the needs of the security investors for auditor independence. However, it appears that a major thrust of the SEC work and of the AICPA documents is providing for the appearance of independence. If such appearance of independence is the prime focus, why should not all external parties or their representatives have a voice in formation and enforcement of the rules on independence? Would not such position provide a "watch-dog" and aid greatly in maintenance of confidence by users in auditors' reports?

In developing confidence in the minds of the users of financials, should we institute a review of the audit report and its underlying documentation? In the judicial system a judge's opinion is appealable to successively higher levels, up to the Supreme Court of the U.S. We do not have an equivalent procedure for appeal of an auditor opinion, nor for a subsequent investigation of it by another professional. Might not the adoption of a procedure for auditing the auditor enhance user confidence levels in the effective independence of the auditor? Research into the opinion of users and auditor reactions to such a required review would be helpful in anticipating the effect of such a requirement.

Operational tests of independence must await a determination of those attributes which contribute to independence and those that detract from it. If those attributes can be determined, the profession and the users of its services,

or the parties designated to assess the existence of independence, can proceed to formulate operational tests or guides to ascertain the existence of a satisfactory state of independence.

Summary

Independence has, in varying degrees, been a concern of auditors and the users of audit reports since the early days of the profession in England and the United States. In the U.S., development of the concept of independence has been pushed by the Securities and Exchange Commission as a representative of one set of users. The American Institute of Certified Public Accountants has, through various publications, articulated concepts of independence and has adopted independence as a mandatory qualification for the auditor. It is suggested that the need for independence is related exclusively to the attest function and that unless the user perceives independence to exist, the attest function has extremely limited value. Various relationships between (1) auditor and client and (2) auditor and external parties can have impacts on perceived independence and independence in fact.

Research needs to be undertaken with respect to user perceptions of independence; the relationships which they feel impair independence as well as those which promote independence. Research could be undertaken on a joint basis by representatives of the profession and representatives of various user groups. This arrangement should promote soundness of research design, impartiality in evidence gathering, summarization and interpretation, and acceptability of the research reports. The research projects could focus on many questions, such as (1) Who should appoint and remove the auditors? (2) What relationships between client and auditor are likely to impede the exercise of impartial, unbiased judgments? (3) Who should pay for audit services rendered? (4) Should reviews of auditor work, including audit independence, be undertaken? and (5) What instruments best measure independence?

Footnotes

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4. Editorial, "Should an Auditor Act as Director?" *The Journal of Accountancy,* March 1928, p. 205.
5. *1931 Yearbook of the American Institute of Accountants,* p. 174.
6. Federal Trade Commission, *Rules and Regulations Under the Securities Act of 1933,* July 6, 1933.
7. *1934 Yearbook of the American Institute of Accountants,* p. 193.
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12. *Restatement of the Code of Professional Ethics,* American Institute of Certified Public Accountants, 1972, pp. 20, 21.
13. *Ibid.,* p. 21.

14. *Ibid.*, p. 33.

15. "SEC Adoption of Amendments to Regulation S-X," Reported by Commerce Clearing House, Inc., June 26, 1972, In *SEC Accounting Rules*, p. 5.

16. *Words, Words, Words,* Forbes, October 1, 1970, p. 54.

17. John L. Carey and William O. Doherty, *Ethical Standards of the Accounting Profession,* American Institute of Certified Public Accountants, 1966, pp. 41, 42.

18. Robert K. Mautz and Hussein A. Sharaf, *The Philosophy of Auditing,* American Accounting Association, 1961, pp. 230, 231. The parenthetical item is taken from a preceding sentence in the same paragraph.

19. For example, see R. V. Hartley and T. L. Ross, "MAS and Audit Independence," *The Journal of Accountancy,* November 1972, pp. 42-51.

20. Michael J. Barrett, *Some Behavioral Attributes of Professional Audit Independence,* Unpublished Ph.D. Dissertation, University of Colorado, 1969, p. iii.

21. *Ibid.*

22. "Security National Seeks to End a Loan Made to Its Auditor," *Wall Street Journal,* April 10, 1974, p. 24.

Discussant's Response to Auditor Independence: Its Historical Development And some Proposals for Research

Le Roy E. Kist

Ernst & Ernst

Glen Berryman's paper conveys to me a very clear impression of the thoughtful sifting of voluminous source material to present a comprehensive yet concise account of the evolution of the independence concept. By contrasting the actions of the AICPA with the actions of Congress and the Securities Exchange Commission and with the English background, he has brought the reader up to date so that he can at least begin to understand and appreciate the problem of independence and to consider the possible need for further research.

In his book *The CPA Plans for the Future* John Carey stated, "From the beginning, independent auditors have recognized that they would be useless to society unless they were fair and objective in their attestations to financial data . . . The assumption that auditors must be independent was taken for granted." Independence in an abstract sense may have been taken for granted but certainly a precise definition of independence and the specifics of its implementation could not be taken for granted. Development of the independence concept obviously didn't come easy and I am inclined to believe that there was, in part, some effort by the American Institute to accommodate a dual standard that would permit the practitioner's occasional financial interest, or other close relationships, in his closely-held client. We have come a long way from the tainted independence of the twenties, and with the adoption of the revised Code of Professional Ethics as of March 1, 1973, I hope that we do not have too much further to go.

Questions for Further Research

Glen has asked five basic questions which, he proposes, should be subjected to further research. The questions relate to the following principal issues:

1. Appointment and discharge of auditors.
2. Relationships between client and auditor that are likely to impede the exercise of impartial, unbiased judgments.
3. Payment for audit services rendered.
4. Reviews of auditor work, including audit independence.
5. Measurement of independence in fact.

In addition, he has asked questions which, if answered, could help in improving the appearance of independence which, we must acknowledge, is of some con-

sequence. In my discussion, I will try to comment on these issues and hopefully to expose another viewpoint for your consideration.

In commenting upon the selection, change, and payment of auditors, the author has drawn an analogy between the work of the independent accountant and that of a judge in a judicial proceeding. Because of the similarities of the activities of the two, he has suggested the possibility of having auditors appointed by a governmental authority, paying them from public funds, and requiring their change when the regulatory agency perceives any diminution of independence.

I agree that the similarities exist; however, there are also dissimilarities and other factors to be considered. I question that a true analogy exists in that, unlike the judge, the auditor must be prepared to defend his judgments if questioned by the users of his reports and, if found to be in error, to take the consequences of his work. The role of an auditor should not be considered as one of resolving differences between antagonists (his client on one side and stockholders, creditors, etc., on the other) but one of searching for the right answers to complex business problems and then reporting them in a manner that is fair to all concerned.

Appointment and Discharge of Auditors

As noted in Glen's paper, the selection process is normally undertaken by management with the concurrence of the Board of Directors. In addition, a number of companies have adopted the practice of asking the stockholders to ratify the selection. I am not aware of any general criticism of that process; however, questions have been raised about the freedom of management to discharge its auditors, probably in some cases for being too independent. In this latter regard, the SEC has been helpful in a recent modification of Form 8-K, which requires the reporting of various current events. Item 12 of that form requests a registrant to report the engagement of a new auditor and also to furnish a separate letter stating whether in the 18 months preceding the engagement there were any disagreements with the former accountant on any matter of accounting principles or practices, financial statement disclosure, or auditing procedures, which disagreements, if not resolved to the satisfaction of the former accountant, would have caused him to make reference in connection with his opinion to the subject matter of the disagreement. The former auditor is requested to furnish a letter stating whether he agrees with the statements contained in the letter of the registrant. This requirement should have a deterring effect upon registrants who may hope to find a more compliant auditor in connection with the change. There is some problem, of course, in deciding whether a bona fide disagreement existed or whether there was merely a difference of opinion which was eventually resolved in the manner requested by the auditor. Is a table-pounding session needed before it can be said that a true disagreement existed? This is a matter requiring careful consideration by the deposed auditor and, hopefully, some concern by the newly appointed auditor.

I understand that consideration currently is being given to requiring the report to be filed at the time of the discharge of the former auditor, rather than upon the engagement of the new auditor. This change should improve the value of the report, but I believe that other changes could be made to improve

it even more. For example, consideration might be given to requiring the registrant to report any intention to discharge its present auditor several months before doing so. A panel including representatives of the accounting profession, as well as the SEC, could review the facts and circumstances and decide whether the divorce should be granted. As it now stands, the discharged auditor may get some satisfaction from knowing that his former client and the successor auditor will be watched carefully, but that knowledge would do little to strengthen his independent attitude in the first place. Research in this direction should be productive.

Relationships between Client and Auditor that Are Likely to Impede the Exercise of Impartial, Unbiased Judgments

In this matter, the pronouncements of the SEC and the interpretations of the AICPA have been very useful and do much to clarify specific situations encountered in practice. Interpretations for the most part have been understandable and progressive. I will not attempt to comment upon any particular interpretation included in the numerous Accounting Series Releases issued by the SEC, other than to note that when the SEC took a dim view of unpaid fees in ASR #126, many accountants must have been made much happier. What is probably needed in this area is to classify and analyze the various interpretations of the SEC and of the AICPA in an attempt to derive from them the fundamental features in a more abstract form.

Payment for Audit Services

As mentioned previously, Glen has suggested the possibility of paying the auditor from public funds. Because of the wide disparity in the extent of services required and the absence of a universal need, this does not seem to be a practical solution. Fees conceivably can affect the independence of the auditor as much or more than if he were to have a direct financial interest in his client. Nevertheless, this aspect appears to be more detrimental to perceived independence than to independence in fact, provided, of course, that other controls and conditions are effective.

Reviews of Auditor Work including Audit Independence

Recently the AICPA, in part upon the urging of the Securities Exchange Commission, undertook to develop a program of quality control. The program, which has been accepted by the Board of Directors of the Institute, calls for the independent review of an accounting firm's performance, looking at the adequacy of the procedures being followed, and later assessing the degree of compliance of the firm with its own procedures. This is something like the review, evaluation, and test of compliance of a system of internal control. In addition to its other features, the review would be concerned with client selection and retention, and independence. When this program is operative, the accounting profession should have another strong and worthwhile tool to police its membership and to maintain a satisfactory level of independence.

Measurement of Independence in Fact

Independence is a very complex issue. For those who have not been involved in an audit, it might seem quite easy to hold a client at arm's length and subject its financial statements to a dispassionate, microscopic review. In actual practice, however, we realize that an auditor must maintain a close relationship with his client in order to understand its operations and to obtain appropriate information essential to the formation of his opinion. Possibly for this reason I would not be very receptive to a suggestion that persons outside the profession should evaluate our performance and independence. In this respect, I strongly believe that the profession should be self-policing.

In the discussion of what constitutes independence, the author appears to be concerned about the appearance of independence. It seems to me that if we are concerned primarily with independence in fact, the appearance of independence will largely take care of itself. Is an active PR program necessary for the accounting profession, or will doing a good job observing all of the present rules of conduct be sufficient? It may be useful to obtain the views of users, but the ultimate conclusion as to what does and what does not constitute independence should be generated from within the profession itself.

Additional Suggestions

Many here may have heard of the so-called "auditor of record" concept, which is receiving active consideration by the SEC. This concept would require the auditor to become more closely associated with his client throughout the year and would require him to assume some, as yet unspecified, degree of responsibility for the adequacy of interim financial reporting. The auditor will become more deeply involved in the day-to-day decisions regarding accounting matters, which he will then be expected to audit and report on at a later date. This association raises a question as to whether the auditor's independence will be adversely affected. It seems to me that research should be undertaken in this matter.

The personal characteristics or traits of honesty and integrity are critical to independence, and men and women entering the accounting profession should possess, and be well aware of the need for, those characteristics in abundance. It has been said that everyone's character is almost completely established during his childhood; however, an awareness of the demands of the public accounting profession in this regard becomes implanted at a much later date. It seems to me that educators could provide a real service to the public if they were to discuss and ponder over these considerations with their accounting students as an integral part of the academic program.

When I was a young man I clerked in a drugstore for several years. At that time I noticed a motto appearing on the label of a large pharmaceutical company that impressed me a great deal, and I have never forgotten it. It said, "The priceless ingredient of every product is the honor and integrity of its maker." This also should be true for every audit engagement. If we were assured of the quality of these ingredients, there would be no need to be concerned over independence.

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The New AICPA Audit Commission— Will the Real Questions Please Stand Up?

Stephen D. Harlan, Jr.

Peat, Marwick, Mitchell & Co.

The AICPA's Board of Directors has recently authorized the appointment of a Commission to make a full-scale study of the functions and responsibilities of independent auditors. It is my understanding that the Commission will consist of seven members, with four members coming from outside the CPA ranks and three from within. The Commission members are yet to be appointed, but I understand the chairman will be from outside the auditing profession. Basically, I believe the establishment of such a Commission is a very positive step that can lead to vast improvements in the world of auditing—IF. If the right issues are addressed and the right questions asked.

During the past fifteen years, as we all know, the auditing profession has come under severe attack. This is particularly true today with increasing pressures from the regulatory bodies, the courts, and society as a whole. The volume of suits filed against auditors has gone up dramatically in the past few years. Also, the grounds for these suits appear to be widening, as indicated by the fact that criminal indictments are being sought and returned against auditors. It seems as though every day is a new day with a different set of ground rules and the auditor is caught somewhere in the middle.

If this is true, then can the mere establishment of a Commission to study auditing be effective? In order to address that question, let us examine the Commission's potential charge as it might be gleaned from the questions contained in the March 11, 1974 issue of *The CPA:*

1. What responsibility should an auditor have for detecting fraud?
2. Should auditors monitor all financial information released to the public and, if so, what should be the extent of their responsibilities?
3. Should the auditor's standard report, particularly the phrase "presents fairly," be changed to express better the responsibilities of auditors?
4. What mechanisms should be adopted to strengthen the functions of auditors?
5. Is the mechanism for developing auditing standards adequate?
6. What should the profession do to reduce the risks of misunderstanding about its role?

In reading these questions, I get the feeling we are continuing to take the same old approach that we have in the past. The questions appear to be addressed primarily to segments of our activities and do not deal with the broader

issues of auditing. Unless the Commission interprets its charge broadly in light of recent and anticipated changes in our society and our economy, I hold little hope for its success. What are these so called broad fundamental issues?

Some Premises

Certain assumptions defining the environment of auditing are necessary in order to properly address ourselves to the issues.

Auditing Exists in a Dynamic Environment. Almost every aspect of the audit is subject to change. At one end of the spectrum, information processing technology has given rise to new auditing techniques. At the other end, society's values are changing—our performance and utility are measured by a constantly changing yardstick.

Information Technology. One of the most noticeable areas of change relates to information processing technology. Changes implemented by clients have necessitated adaptation of many traditional auditing tools. This same technology has permitted the profession to introduce more sophisticated and more effective tools.

The processing activities being carried out by clients have changed. Communications and terminal technology have led to extensive remote access to machine-sensible data. This, in turn, has had some tendency to reduce the volume of documents that are available for verification. Still further, the development of integrated systems with operations research models imbedded into the normal flow of data processing has resulted in having transactions initiated and then processed within the same computer system. Without dwelling excessively on this point, it suffices to say that it has been necessary to adapt auditing procedures to meet the changing situation.

In a very real sense, the auditing firm is a business that must itself take advantage of changing technology to improve both the cost and effectiveness of its operations; it has been necessary to use computers to apply tools such as statistical sampling and model building that are needed to meet our professional obligations.

Some of the advances in the information processing area have the potential for making subtle, but significant changes in auditing objectives. The development and implementation of large-scale data bases has raised increasing concern regarding security and privacy issues. Will the auditor, who is already charged with an objective review of a company's data processing system, eventually be held responsible for attesting to the performance of controls in this area?

As another possibility, assume that a company's financial statements are disseminated by having investors use remote terminals to access reports maintained in the data bank of an information utility. Will this movement have an impact on the auditor's liability exposure by altering the definition of the foreseeable class of users? Will the flexible retrieval capabilities of such systems force the auditor to offer the equivalent of piecemeal reports, since users can access any parts of the statements that are relevant to their decisions? Will the auditor's opinion have to be broadened to encompass interim reports, since reports maintained on such a system will certainly be updated during the year?

Social Attitudes. In the same sense that it was possible to say that the

changes in information processing technology are altering the operating environment, it is equally clear that there have been changes in social attitudes. Directly and indirectly, more attention is being focused on managerial actions. Will (should?) we eventually take a position regarding the effect of management's actions on resource allocation, on the utilization of energy resources, or on minority groups as a potential source of employees?

Changes in social attitudes are particularly important for the auditing profession. The scope of our liability is ill-defined. In this age of consumerism, it is all too common for limits to be imposed after the fact by courts that are reacting to legal actions. This point is of crucial importance. Rule 23 of the Federal Rules of Civil Procedure makes it easy to institute class actions. The class actions, in turn, increase the magnitude of our exposure and tend sometimes to shift the focus of interest away from the party allegedly wronged and to the plaintiff's attorney as the individual who has the largest readily identifiable financial interest in the action.

In summary, then, the auditor is operating within an ever-changing environment—one that is creating both new opportunities and new pressures.

Utility Is in the Eyes of the Beholder

There is no rationale for auditing services unless they serve some definable objective. In a market-oriented economy, this means that the absence of such utility will certainly result in an unwillingness to incur the cost of the services. In the quasi-regulated position of auditing, the lack of utility results in either a reluctance to mandate the performance of services or the establishment of additional regulatory pressures to align the services provided with the identified needs.

The most important observation following from this premise is that the auditor has only limited control over the nature of the attest function. Utility is determined, not by the auditor, but by the market for his services. This is a complicated situation, because the attitudes of the market place are constantly changing. Not only are the values changing, but the use of the regulatory agencies and courts to force further changes and realign economic distributions compounds the problem.

A System Is Needed to Link the Auditor to His Varied Audience

Operating within the environment specified above, it is clear that communication between the auditor and his audience should not be left to after-the-fact determinations by the courts and the regulatory agencies. The current situation leaves something to be desired.

An argument can be made that the profession is talking to itself when we talk about not having any responsibility for detecting fraud. The same is true with regard to our attempts to define the class of intended financial statement users as being either informed or naive (or both simultaneously).

Leaving the resolution of these issues solely to the regulatory bodies may not be useful. In the past, regulatory attempts have often proven to be haphazard efforts to resolve short-run issues. For example, the SEC has recently the profession must rest upon.

issued a pronouncement requiring the disclosure of inventory profits. While well intended, the requirement fails to give adequate recognition to the broader issues associated with reporting the effects of price level changes. Regulatory agency rulings rarely reflect the kind of unified, internally consistent, perspective that

In summary, then, the auditing environment can be characterized by:

1. A need to operate in a constantly changing environment.
2. A utility structure that is influenced by its audience.
3. A need for communication between the auditor and the market for his services.

General Parameters of a Useful Framework

It is necessary to examine the framework of auditing before we can make sensible recommendations regarding crucial issues influencing the profession. There should be general agreement that the major product of the auditing profession is attestation, i.e., offering a professional opinion regarding actions taken by others.

Attestation. Systems theory tells us that the effective functioning of a system requires that each of its elements must function in accordance with predetermined performance standards. Also, each element must have available information on the conditions existing in any other elements on which it depends, i.e., there must be reliable communication.

Attestation enters into this process in two ways. First, it is a convenient tool for use in a very large system where it is not possible for each element to individually verify the functioning of the elements upon which it depends. In this context, it can be argued that to justify reliance, it is more efficient for an independent attestor to review various elements and offer judgments regarding their functioning, than to have each element verify each other element's performance. And second, one should not overlook the behavioral impact of attestation on a system that has a goal and knows that its actions are being examined. This is the well documented behavioral impact of auditing—the fact that people will alter their behavior because they know that they are being watched.

Attestation is thus a two-pronged tool for controlling a system. It provides information regarding the activities that are taking place in a given segment of the system. At the same time, it alters the actions of some system elements in order to keep them aligned with a set of assumed goals.

Parties of Benefit. If you are willing to grant the framework presented above, then it becomes clear that we can get our feet back on the ground and identify two specific groups that can and do benefit from our attestation services:

1. *Users of Information.* This class includes credit grantors, investors and regulatory agencies. In a less direct sense, it includes the voting populace, who by their electoral capabilities, can influence the regulatory environment. The class also includes decision makers in a large organization who are located a distance away and therefore unable to conduct their own verifications.
2. *Managers.* Reference is being made here to the behavioral impact of the attestation process. The class of managers is potentially very

large. The owners of large corporations are certainly included, since they use this process as one of several tools for keeping management aligned with stockholder objectives. The regulatory agencies fall into this same broad category. And finally, the management of the business uses this same approach on a much smaller scale.

Attestation and the Auditor

If one is to make sense out of the current situation, one must take the statements regarding attestation in general and relate them to the current situation. There are several questions of critical importance. What is the relationship between the profession and the various governmental agencies? What is the scope of the profession?

Governmental Relationship. A very careful balancing act must take place in terms of the relationship between the auditing firm and the governmental agency. The agency mandating auditing services should certainly be one that is influential, i.e., one that can associate serious penalties with failure to satisfy existing standards. At the same time, the requirement for attestation services must be framed in a manner that does not take away flexibility in meeting the needs of the market place. There is, of course, a middle ground that attempts to balance the needs of the regulatory agency with those of the auditing profession and society.

Identification of the auditing profession with a particular governmental agency is a two-edged sword. For historical reasons, the profession has become identified with financial representations. This, in turn, led to its association with the SEC. While the power of the SEC gives the profession much of the power that it currently has, it also creates problems. There is the constant threat of the SEC "take-over." There is also an identification with the financial community that makes it hard for us to address other attestation-related needs to society.

Scope. There is conceptually no limit to the scope of attestation activities. At the same time very practical limits do exist. As a practical matter, the value of the attestation services must be validated in the market place by the willingness of society to pay for the services. Hence, there is a definite need to recognize two factors—the expertise that is actually possessed by the attestor and the extent to which society is willing to grant him this expertise.

The close relationship with societal attitudes is at the heart of many of our problems. Auditing has been traditionally associated with financial representations. Firms in the field have thus sought to employ staff members who have a financial orientation, just as these financially trained people have sought out the firms. Financial identification is further reinforced by the involvement of the profession with the SEC. There is thus a definite limit to the profession's ability to define its own scope (at least in the short run). This point is the basis for some of our present difficulties. On the one hand, society sometimes attributes expertise to us, even if we deny that we possess it. This is the case with regard to the detection of fraud. On the other hand, it limits our ability to alter the scope of practice, since the value of the services provided depends on both the expertise that we actually possess and on the expertise that society is willing to grant us.

Toward a Dynamic Future

The present situation is far from satisfactory. As members of a recognized profession, we cannot sit back with any real degree of self-satisfaction.

There is a definite need for two types of research and development activities on an on-going basis. It goes without saying that there must be a continual up-grading of current services. Hence, there must be research to maintain the status quo in the face of changing technology and to improve the things that we are now doing.

It is absolutely essential that there be an on-going program looking into new areas of attestation. There are two reasons for this need. First, like any business, the auditing firm must be able to adapt to changing needs and to introduce new services for which there is a demand. The fact that the value of auditors' services is at least partially determined by society is a point that cannot be overlooked. If there is no research to develop skills with which we can be identified, it is highly unlikely that society will give us credit for these skills (and what's more, dangerous if they *do* give us such credit).

It may sound heretical, but as a practical matter, the profession does and should pay attention to the marketing of its services. Classical lore has it that the market beats a path to the better mousetrap, but that is not a safe enough base upon which to build the profession. It is necessary to give explicit attention to the development of a well organized marketing mechanism for the profession that not only makes the market aware of our expertise, but also of the limits associated with our services.

The Real Questions

In my preceding remarks emphasis has been placed on financial representations, because this has been the traditional area of our expertise. Our legitimacy has been derived from both the market place and the securities laws, and this has further acted to define the nature of our image in the eyes of our audiences.

However, the current situation is quite critical. Legal suits are mounting together with the magnitude of the damages being claimed. Respected publications are questioning the way in which we are handling our affairs. There is reason to believe that auditing lacks respectability within the academic institutions—our primary education and research arm. How many schools would offer auditing courses in the absence of the CPA exam and state licensing requirements? How many doctoral students are looking to auditing as an area for specialization and research?

Commissions are appointed infrequently, with an expectation that they will have a significant impact. Hence, due care should be addressed to the charge of such a group. Appropriate objectives of this Commission should be to identify the issues facing the profession, the options available, alternative courses of action, and a structure for achieving an orderly resolution of the issues.

The questions that should be addressed should focus on the fundamental issues that are impacting the profession at the present, and those that have the potential for impact in the future. Among those issues are:

1. *What is the role of the auditor in society?* Our environment is formed by our expertise, by the legal structure surrounding our

actions, and by the attitudes of those who (potentially) use our services. To whom are we responsible? What are the attitudes towards the profession? What are our perceived strengths and weaknesses? What factors do our audiences focus upon when forming their opinions of us?

2. *To what extent do we have the ability to influence our role in the future?* As stated above, this role depends upon both our expertise and audience perception of our expertise. The apparent gap between our self-image and the users' views of us is at the heart of many of our current problems. Is it possible for us to establish a structure that will help to keep this image discrepancy within some acceptable bounds? How can we do this?
3. *Who are the users of our services?* The present structure assumes that particular users of our services (the relatively sophisticated creditors and investors) are dominant. This assumption is the basis of some present difficulties. Consideration must also be given to *potential* investors and creditors, as well as to management and the general public.
4. *What are the decision making needs of the users?* The Trueblood Committee studied the objectives of financial statements, and the committee findings are now being considered by the Financial Accounting Standards Board. Other user-related questions include the need to attest to forecasts and related underlying assumptions, adequacy of internal control, and management effectiveness.
5. *What should the structure be to control quality and auditing standards?* To what extent can the profession operate in a self-contained manner? Who should establish auditing standards? Who should monitor auditing quality? How can auditing be kept current, or will we need another Commission in a few years?
6. *Should there be changes in the relationship between the auditor and the firm being audited?* At the present time, the auditing firm is retained by a firm in order to offer an opinion regarding its financial representations. The auditing firm is presumably independent. It also presumably has a large degree of influence on the choice between alternative techniques. However, there are many who question this independence. There is no easy solution to the problem. While I am not proposing this solution, it is useful to recognize that in England, once the firm has chosen an auditor, it is very difficult for it to make a change. The system appears to work.

These are not all of the questions requiring answers and there may be some debate regarding the inclusion of one or two. Nevertheless, I believe they do focus on the fundamental issues that face the profession.

This is a most unique moment in the history of our profession. We have asked "outsiders" to help us identify the problems and develop solutions. We should view this Commission as an opportunity to objectively study our entire role and responsibility to society. Let's all hope that the real questions—and answers—eventually stand up.

Discussant's Response to The New AICPA Audit Commission— Will the Real Questions Please Stand Up?

Jack C. Robertson
University of Texas at Austin

One finds no argument with Mr. Harlan's belief that establishment of the AICPA Audit Commission can be a positive step toward improvement in the world of auditing. However, as he implies, it is not merely the appointment that represents progress but rather the ultimate product of the Commission that finally must be perceived as relevant and meaningful. In order to attain these latter qualities not only must relevant and meaningful (i.e., *real*) questions and issues be raised, but they must be resolved to the satisfaction of the "worlds" that exist *outside* the world of auditing.

Other Worlds

Some view auditing as a very small sub-world in society and others view it as a universal, pervasive and larger world in its own right. Typical expressions of the various worlds, which auditing is both in and of, are couched in terms of the societal segments that are interested in financial communications.

In order not to belabor this old and familiar concern, let me just draw a picture in words: Visualize a series of concentric circles that represent various societal spheres of interest. In the inner circle lies *accountancy,* and in successively larger outer circles *management, present stockholders, all other present investors, other economic interests* (e.g., labor, competitors, suppliers), *potential future investors,* and *other social-political interests* (e.g., regulators, ecologists). In my mind's eye, auditing is the set of spokes that connects these other worlds to accountancy, for better or for worse.

I wish to make two points based on the foregoing preamble: First, auditing is inextricably bound to accountancy in current thought, thus it is oftentimes difficult to distinguish an *accounting* question from an *auditing* question. (More on this point later.) Second, the length of the imaginary spokes is important to auditors in the context of specifying auditors' role(s) in society. A closely allied corollary question in this regard is: "Who is the auditor's client?"

I submit that the definition of "client" is more than a mere exercise in semantics. The definition lies at the heart of auditors' acceptance of professional responsibility, and the issue constitutes the premier real question for the new audit commission. The AICPA Code of Ethics defines client as the person(s) or entity which retains an auditor for professional services. I perceive this definition as deficient because it does not fully recognize the social-political concerns of other worlds with whom an auditor has a social contract to fulfill.

Mr. Harlan has recognized this issue forthrightly in his own first question for the commission, and I am in full agreement with him. He has augmented his first question with his last one, raising the issue of the relationship between the auditor and the auditee. These two real questions are parts of the same issue, but they have been somewhat slighted in the reported charge to the Commission.

The Art of Raising Questions

Relevant and meaningful decision outputs cannot be attained unless the real questions are first identified. This assertion is a truism long recognized in a technical sense by practicing auditors as a matter of decision theory (*viz.*, relevant evidence cannot be obtained unless first the relevant assertion, explicit or implicit, has been recognized and formulated as a decision problem). In the context of the charge to the Commission, questions are real only to the extent that they are relevant and meaningful to the "other worlds." This does not preclude their being relevant and meaningful to auditors alone, but if they are limited to technical issues, then the other worlds will be disinterested and will perceive the Commission's product as self-serving.

The essence of the art of raising questions about auditing, thus, is the art of making them meaningful to non-auditors. The other worlds, in my opinion, are interested in *meta-conceptual* questions and the philosophical impact of responses to them. Competing with this line of approach is the auditor's need to pose *operational* questions which can be resolved in a manner amenable to "making things work." As an expedient, the Commission charge could cloak the operational questions in a mantle of philosophy, but it has not been done in this manner.

Nevertheless, I believe that the Commission charge contains operational questions that correspond in part with Steve Harlan's first and last question points. In order to be quite specific, I suggest that the following portions of the charge are consistent with real questions of auditor role and auditor-auditee relationships.

1. What responsibility should an auditor have for detecting fraud?
2. Should auditors monitor all financial information released to the public and, if so, what should be the extent of their responsibilities?
3. Should the auditor's standard report, particularly the phrase "presents fairly," be changed to express better the responsibilities of auditors?

In my perception of the social milieu, each of these questions will have to be answered in such a manner as to expand the responsibilities presently accepted by auditors to match the expectations of the social circles that lie beyond management. The other worlds will apparently perceive anything less as a recalcitrant and self-serving ploy to avoid professional responsibilities. Society, as we know it today, expects *more not less* from independent auditors. Resistance to this force would be futile and self-defeating.

In a like manner I believe that the Commission charge recognizes two other of Mr. Harlan's real questions: his second and fifth ones concerning auditors' ability to influence their future role and the structure to control quality and auditing standards. As before, the Commission charge is phrased in operational

terms rather than the conceptual language used by Harlan. Specifically, the Commission's questions are these:

1. What mechanisms should be adopted to strengthen the functions of auditors?
2. Is the mechanism for developing auditing standards adequate?
3. What should the profession do to reduce the risks of misunderstanding about its role?

However, this set of questions does not provide much comfort and succor. The last one contains the seed of self-serving limitation of responsibility. It smacks of the context of bringing social expectations *down* to the level of current auditor acceptability in order to reduce the incidence of lawsuits. A neutral expression of the same concern would allow the possibility that auditors would *raise* their functions to the level of social expectations, and this possibility is implicit in Harlan's phrasing of the issues.

In order to summarize on the art of raising questions at this point, let me observe first that four of the issues that Steve Harlan poses and the questions charged to the Commission appear to be closer in spirit than is suggested by him. There still exists the gulf between the meta-conceptual concerns of the other worlds and the operational concerns of professional auditors, and the issue of "who is the client" is apparently to be neglected by the Commission. If forced to a choice, I would find more relevance and meaning in Mr. Harlan's presentation because it is more conceptual and more cognizant of the real issues.

A Troublesome Dichotomy

The art of auditing is uniquely characterized by investigatory problems of recognizing economic assertions and obtaining evidence related to them. These facets are essentially private concerns of the auditor, becoming public concerns only when an audit report is the center of a dispute (as in a lawsuit). The ongoing public facet of auditing lies in the auditor's duty to match assertions and evidence to criteria and in the communication of his findings to users. At this latter stage auditing becomes inextricably bound to accountancy and bound to the public interest.

Although I would personally be relieved of many troublesome problems if I, as auditor, could slay the accountancy dragon by declaring the independence of auditors, nevertheless, I fear that I would have only toppled a straw man, and may well have succeeded only in creating more problems rather than fewer. Yet this philosophical independence from accountancy appears to be important to members of the other worlds. The manifestation arises in argumentation over the phrase "presents fairly" and in discussions of reports on controls, forecasts, interim statements and other matters that have largely been given only passing attention in official accounting theory.

Mr. Harlan has fearlessly thrust these accounting questions on the new Audit Commission. Apparently, as a practicing auditor, he does not share my academic proclivity to keep accounting and auditing questions neatly separated. Upon reflection I confess that I too am convinced that it is incumbent on auditors to identify the users and their information needs, thus identifying the appropriate content of audit communications. To undertake such a task would indeed repre-

sent a break with the past and would in fact be a new approach; it would take audit practice out of its own ivory tower and marry it to the other worlds that it purports to serve.

One must recognize, however, that acceptance of these real questions (the third and fourth ones presented by Harlan) could easily lead auditors to many of the same issues currently being addressed by the SEC. We need not be reminded that accountants and auditors are presently resisting many SEC decisions. Nevertheless, to proceed as Mr. Harlan suggests might result in the identification of classes of users (justifying differential disclosure or multiple special statements in place of general financial statements). The Commission might find sufficient demand for attestation to interim statements, forecasts, and other matters currently favored more heavily by non-auditor worlds. As a corollary issue, the Commission could support the efficacy of quality control organizations that would "audit the auditors." In brief, the new Audit Commission could emerge as a private-enterprise SEC.

Herein lie two possibilities: (1) Rejection of the Commission and resistance of the same type that characterizes current relations with the SEC, or (2) Happy acceptance of the Commission as the means of recovering responsibilities that were slipping away into other-world hands. The latter alternative would require action responsive to the *meta-conceptual* concerns of non-auditors, and in all likelihood would transform the world of auditing.

In Closing

Among points that I have thus far neglected is the important matter of *expertise*—that which auditors admit to having and that which others presume they have. I agree that non-auditors may be willing to presume that auditors have greater abilities than the auditors themselves will admit. This incongruence creates a very real barrier to satisfying the meta-conceptual questions. A "marketing" approach may ameliorate the problem, but it must not degenerate into a defense of the *status quo* which is so often characterized as "education of the public." Auditors should be pleased rather than frightened that the other worlds will grant such recognition of professionalism, and we should begin to accept the societal recognition lest it melt away.

As a summary, I find an appeal in Harlan's real questions for the new Audit Commission to accept the kind of meta-conceptual questions that other worlds wish to raise. I find too that the operational questions charged to the Commission are technical transformations of some of the real concerns, and I believe that full credit has not been given where it is due. Yet other important issues remain, and if they are not raised, I anticipate with Harlan that we may need another Commission in a few years.

3

Controlling Audit Quality: A Responsibility of the Profession?

Andrew P. Marincovich

Andrew P. Marincovich & Co.; President, National Association of State Boards of Accountancy

When the chairman asked me to deal with the subject "Controlling Audit Quality: A Responsibility of the Profession" he did not indicate the printed program title would end with a question mark. It would take a brave man to answer the broad question of responsibility of the profession in the negative, but it may be constructive to inquire whether the programs of the profession—either in being or under study—are adequate to discharge this responsibility.

The subject of controlling audit quality involves three inter-related questions: "When," "How," and "By Whom." It seems clear that optimum audit quality requires control measures at each stage of the game, i.e., in the educational preparation, in the examination and accreditation process, and in actual professional practice. The questions of "How" and "By Whom" are more complex, and we shall attempt to explore some possibilities.

Initial Controls

State laws have established educational requirements for entrance into the profession—usually a baccalaureate degree with a certain minimum concentration in accounting and related subjects.

In a 1970 California study, Professor Alan R. Cerf made certain comparisons between the legal profession and the accounting profession in which he mentioned the importance of the law school and the standard of legal education for admission to the bar. He posed the following questions:

> The CPA has made significant strides in developing examinations for admission to the profession. But has he given sufficient attention to the preceding education? Particularly has he related the educational requirements to the entire functions of the CPA?[1]

In May of 1969 the AICPA council adopted the recommendations of the Beamer Committee. Among the recommendations of the committee were a five year program of professional preparation and elimination of the experience requirement of state boards. Two years after the report, in a presentation at NASBA's annual meeting, Mr. Beamer reported that in eleven states, under varying conditions and amounts of education, it was possible for a candidate to receive the CPA certificate without meeting an experience requirement.

A joint AICPA-NASBA Committee on Professional Recognition and Regulation concluded in 1973 that, "the accounting profession can attain full professional stature only through establishment of professional schools. In support of this position, we point out that other learned professions, which the accounting profession often seeks to emulate, have professional schools with close ties to the practicing portion of the profession."[2]

The question of academic professional preparation continues to have the attention of the profession's leaders. Their judgment as to the proper course to be selected in the light of realistic future needs will be an important factor in fostering high standards of audit quality. The National Association of State Boards of Accountancy (NASBA) can act as a catalyst in the consideration of these matters by State boards and can promote a reasonable consistency of approach among jurisdictions.

Critical to the performance of a profession as a whole is the quality of the personnel who gain entrance to that profession. Education, demonstration of competence by examination, and character are the basic ingredients for a successful candidate. It has been suggested that character checks on those entering the profession may be an important step in strengthening the standards of the accounting profession. By whom should such checks be made? The State Boards are the focal point. Their investigation of applicants may not be as searching as it should be. The routine inspection of a few letters of reference hardly insures the desired standards of integrity, dedication, professionalism, etc. Should not the inquiry into the character of a candidate be at least as searching as that given in connection with a security clearance, a mortgage application, or membership in a social club? This may be an area where NASBA can provide a suggested approach, or possibly assist in actual screening of candidates as a service to State Boards.

We might also inquire whether educational institutions, particularly the professional schools of the future, should not be more selective in admitting students to the study of accounting with a view to entering the profession. One prominent educator has suggested that such a selection process might be more effective in raising standards than mandatory continuing education after entrance into the profession. Professional schools of law, medicine and the ministry have long utilized techniques for "weeding out" those deemed to be unfitted for professional careers by reasons of temperament or character.

Administered by individual state boards, all states and territorial jurisdictions, fifty-four in all, utilize the same national examination and national advisory grading service provided by the AICPA. This is a major achievement and certainly is a unifying force in the accounting profession. Careful attention is paid to the preparation and security of examination questions by the AICPA. NASBA has developed and distributed among state boards a procedural manual for state boards to help guarantee, as much as possible, uniform conditions for the CPA candidate. NASBA also collaborates with the AICPA Board of Examiners in a continuing evaluation of the adequacy and effectiveness of the examination.

So much for the initial controls which have some relation to achieving a satisfactory level of audit quality. How can we insure these levels of quality in actual professional practice and whose responsibility should it be?

Subsequent Controls: Mandatory Continuing Education, a Need?

Until recently, once a candidate received his certificate the only requirement to retain his certificate and license to practice was to pay his annual or biannual fees.

Within the past few years, the concept of a structured continuing education requirement (either mandatory or voluntary) has come to the fore as an important means of insuring a higher standard of audit quality. Mandatory continuing education was recommended in a report of the Beamer Committee of the AICPA. The recommendation was approved by the Council of the AICPA. At last count twelve states had adopted mandatory continuing education statutes and regulations and at least fifteen others were in the process of doing so. With certain exceptions, all licensees in continuing education states will be required to provide evidence to their respective state boards that they have complied with the regulations. These programs are directed to individual competence, however, and do not deal directly with the mechanisms for controlling audit quality from a firm point of view.

Another Way

Is there another way to approach the problem—namely, some kind of quality review directed to the end-product: the auditor's report (plus the organizational structure which produces it)?

In the 1960's a Practice Review Program was initiated by the AICPA for review of published corporate reports and with subsequent correspondence with the accountant if a report was determined to be deficient. State Societies were encouraged to supplement the AICPA program. William C. Bruschi, Institute Vice-President, reported in a paper at the Third Annual Symposium for Accounting Educators that ". . . unfortunately in many states, the state society program has languished because of an absence of reports for the committee to work on." During eight years of service on the Board of Accountancy in my own state I was not aware of any case where a substandard report was referred to the Board for disciplinary action by the Practice Review Committee of the State Society. I hasten to add that it is understood by me that the program was intended to be educational and not disciplinary; however, particularly in cases of flagrant substandard reports, I wonder why it should be so limited. How can we get more grist for the mill? In California various state agencies require filings of financial reports for various reasons such as the Department of Finance for school district audits, State Controllers Office for municipal reports and the Department of Health for health care provider reports to name a few. Staff investigators from the California Board would routinely review such filings for deficient reports. Because of lack of personnel in recent years the volume of reports reviewed has been limited. The agencies themselves occasionally submit apparent substandard reports to the Board. Should State Boards initiate a vigorous program for the review of such reports? Except for listed companies, public agencies and governmental agencies, a vast majority of audited and unaudited financial reports prepared for third party use by CPAs are not potentially subject to peer review. Should they be? If so, with what agency should they be filed and by whom should they be reviewed? Would legislation be required

or only an administrative agency ruling? What about the confidentiality of information where non-public companies are concerned? Would the added "red tape" and potential lack of confidentiality discourage use of the independent audit in the "small" or "closely held" corporate situation? Would credibility be enhanced sufficiently to provide encouragement for peer reviews?

These are not easy questions. We can point out that in some countries of the world, financial statements of *all* businesses must be filed with an appropriate agency, thus opening the door for a review of audit quality on a broad basis—assuming the requisite authority and capability.

An Independent Audit of the Auditors

The "hot question," at the moment, seems to be the independent performance audit (quality control review) of the auditor. This concept deals with the firm's controls more than with individual competence. The CPA would be the first to point out that the independent audit of publicly held companies is a cornerstone of the capital market in the United States. Should he not be receptive, therefore, to an audit (quality review) of his own firm?

In an address at the annual meeting of the Institute in 1972 William J. Casey, Chairman of the Securities and Exchange Commission suggested that the profession is ". . . very much in partnership with the SEC. This partnership was formed by the congressional decision made almost 40 years ago to refrain from any effort to establish a Federal corps of auditors to verify corporate reports but rather to rely on the independent audits made by independent accountants."[3] His comments may have been prophetic of certain more recent developments.

The Quality Review program of the Institute began in 1971 on an experimental basis and was fully operational in 1973. The program came to the attention of the Chief Accountant of the SEC, John Burton, who requested that a program be developed for reviewing the quality control standards of firms considered by the SEC to be in need of such a review. The agency has the necessary authority to perform such reviews but prefers not to do so. The intent of the program would be to provide the SEC an alternative to or supplement to ". . . other types of sanctions which might be imposed under Rule 2(e) as a means of providing assurance to the public and the Commission that adequate standards have been established and implemented. It is felt that practicing firms will be benefited by such a program with consequent benefits to the public which the profession serves."[4]

How will the program work? The AICPA will designate a panel of qualified reviewers. The SEC will select a Review Team manager who will then appoint other members of the team from the panel. The work of the review team would be done under Court Order which would provide a cloak of confidentiality to the review procedure. Whereas the AICPA's review program for local and regional firms focuses upon audit procedures and reports, the thrust of the program developed with agreement of the SEC is upon the reviewed firm's *quality control procedures.* At least two firms are presently scheduled for review. The AICPA Special Committee on Quality Control in a report outlining a tentative program for an inspection of quality control standards states:

An inspection conducted by practicing Professionals under AICPA auspices, is preferable to one conducted by persons who may not sufficiently understand auditing practice, whether they be members of the staff of the SEC or other persons selected by the SEC.

It should be pointed out that this type of examination is a new exercise in many respects. Until the first examination is conducted, a pattern of conduct by the examiners and by the SEC is not fully discernible.[5]

Professor Cerf in his 1970 study suggests:

> The publicity for a profession associated with malpractice suits tends to damage the public confidence in the profession. It would take a great deal of study to determine how the CPAs could perform autopsies on the work of their fellow practitioners. However, this may be a better solution to maintenance of discipline than revocation of licenses or expulsion from the professional societies.[6]

Except for the voluntary Quality Review program of the Institute which is just getting under way and has achieved limited coverage, other programs seem to accentuate the negative (disciplinary aspects of control). The Institute and some state societies are considering an abridged version of the voluntary program, i.e., a one-man-day review for smaller firms. Unresolved questions include:

Who would pay for such reviews?
Would they be coordinated or supervised by State Boards?
Would they be really adequate or only cosmetic?
Would they be educational or would they include sanctions?

It may be helpful to return to Mr. Casey's 1972 address to the Institute in which he said:

> It seems to me that an important profession-wide requirement for the accounting profession is the establishment of an improved professional quality control system. Membership in the national professional organization of accountants should represent more than a license and paying dues. It should represent more even than agreement to a code of ethics, as vital and necessary as that is.
>
> It might be that a more formal mandatory self-policing system should be established so that every professional practice is reviewed periodically by other professionals. In the self-regulation of the securities industry, a comprehensive annual inspection is called for. The situation is not exactly analogous, and such a comprehensive inspection may not be necessary on an annual basis in your work. However, if your organization is to be a truly responsible self-regulatory body, some self-policing effort seems called for.[7]

Other Steps

In the meantime, other steps must be taken to improve the regulatory control procedures affecting the profession.

Underscoring this need is a recent Wisconsin court decision which declared unconstitutional Wisconsin statutes that gave the State Medical Examining

Board the power to *investigate and discipline* doctors for unprofessional conduct. State boards of accountancy may very well be required to get out of the business of acting as the investigator, prosecutor, judge, and jury. If, however, state boards of accountancy are permitted to continue in those roles, should it be the responsibility of the profession to develop and present cases of substandard professional performance to state boards when the educative process fails or has been shunned? Is such cooperation and assistance to regulatory boards and commissions a legitimate part of self-regulatory procedures? Is it a national outgrowth of the Institute's present efforts to integrate its procedures with the state societies?

Conclusion

It seems clear that the problem of controlling audit quality is so complex that it will require a cooperative effort on the part of practitioners, professional organizations, government agencies, and regulatory boards. No small part of the problem lies in the heterogeneous nature of the profession. Measures which are designed to insure a level of competence in individual CPAs may have little effect when related to the quality control "apparatus" of a medium- or large-size firm. Measures which might give comfort as to quality control within a firm might rest on "quick-sand" if a basic level of competence of individual licensees is not looked after. It may well be that a multi-pronged approach is required which would include:

1. A continuing education program for the individual licensee.
2. An effective investigatory procedure, possibly the peer review, as a prophylaxis for the "cause celebres," the flagrant cases.
3. An availability of talent which can be programmed for voluntary reviews under the auspices of professional organizations.
4. A testing program by State Boards, under statutory authority, of the quality control apparatus of firms.

It is encouraging to note that these questions and others are being actively considered in a number of forums. The CPA must have high standards and the public must have confidence that he is what he says he is. Wally Olson suggests:

> It is crucial to our credibility that we carry on a vigorous program of self-discipline. Such a program must not only be effective but must be perceived to be effective by the public at large.[8]

Footnotes

1. Alan R. Cerf, *Professional Responsibility of Certified Public Accountants,* California Certified Public Accountants Foundation For Education and Research, 1970, p. 32.
2. *Report of the AICPA-NASBA Committee On Professional Recognition And Regulation,* July 1973, p. 15.
3. William J. Casey, "The Partnership Between the Accounting Profession and the SEC," *American Institute of Certified Public Accountants, 1972 Annual Meeting,* p. 1.
4. "Tentative Program for an Inspection of the Quality Control Standards and Procedures of an Accounting Firm Pursuant to Rule 2(e) of the SEC Rules of Practice," *AICPA Special Committee on Quality Control,* October 8, 1973, p. 1.
5. *Report of the Special Committee on Quality Control,* American Institute of Certified Public Accountants, October 8, 1973, p. 2.
6. Alan R. Cerf, *Professional Responsibility of Certified Public Accountants,* California Certified Public Accountants Foundation For Education and Research, 1970, p. 37.
7. William J. Casey, "The Partnership between the Accounting Profession and the SEC," *American Institute of Certified Public Accountants, 1972 Annual Meeting,* pp. 11-12.
8. Wallace E. Olson, "A Time for Change in Changing Times," *American Institute of Certified Public Accountants, 1972 Annual Meeting,* p. 14.

Discussant's Response to Controlling Audit Quality: A Responsibility of the Profession?

Gordon L. Murray

Haskins & Sells

While I have done a lot of speaking over the years, I have never participated in a meeting with this particular format. I assume that my comments are to be directed toward stimulating discussion during the period that will follow. In the interest of stimulating such discussion and to preserve my own integrity, my comments on this question will be strictly as I see it.

I have studied Andy Marincovich's paper and it appears to me that the following points emerge:

- The title is "Controlling Audit Quality: A Responsibiltiy of the Profession?" with a question mark. To me the question mark is the most significant item in that title.
- Andy's paper says ". . . it may be constructive to inquire whether the programs of the profession—either in being or under study—are adequate to discharge this responsibility." This statement appears to assume that the answer to the question is that controlling audit quality *is* a responsibility of the profession. Is that really so?
- Reference is made to the Beamer Committee on the matter of continuing education requirement. While Mr. Beamer was a partner of mine before his retirement, it does not necessarily follow that I agree with him on continuing education. However, I also don't presume to be an expert in this particular area. Therefore, I will dispose of the continuing education matter by simply saying that what I have seen adopted so far is a very feeble, and perhaps unnecessary effort. I also have a bias that formal education for a practitioner has very definite limitations and that essentially a person's continuing education is what he does in connection with researching to find solutions to particular problems occurring in day-to-day practice. To show how far I am probably away from current thinking on this subject, my own firm now has a continuing education program that is required for all persons through the age of 50. The best part of this program, to me, is that I am now 56 and therefore I am not going to be involved.
- The paper suggests that ". . . character checks on those entering the profession may be an important step in strengthening the standards of the accounting profession." My own experience has included work for two Big 8 accounting firms, three industrial firms as the chief financial officer, and a major firm of management consultants, all of which have involved extensive executive recruiting activities. I can only say that I believe there are very real limitations to what can be accomplished through any attempt to conduct "checks of char-

acter." In one instance a person that I was evaluating had all of the evident credentials for a particular position but subsequently turned out to be homosexual. No one is going to tell you in a character check that a person has that problem, nor is anyone going to tell you that a person is an alcoholic. Therefore, I conclude, based upon experience, that there are important limitations in any effort to elicit character representations.

- Andy refers to the Practice Review Program as "another way." To me, practice review, however conducted, is not necessarily "another way" of getting at the quality problem, as this and other possible programs are not mutually exclusive or inclusive. Rather, one must consider the whole matter.
- In speaking of an independent audit of the auditors, the paper cites Mr. Casey, the former Chairman of the SEC, as suggesting that the profession is very much in partnership with the SEC. This poses a vital question of to what extent the profession wishes to become part of the enforcement machinery of the SEC and therefore a quasi-arm of the Government, as contrasted with the independent practice of public accountancy. This, I suggest, is a very vital matter for everyone in the profession to assess although some already say that we have been functioning in an enforcement role as an agent of the Government for some many years.

To all of these suggestions that the profession has the responsibility for the enforcement of performance—for continuing education—for some more stringent entrance requirement to the profession—it is very easy to respond with a "yes" answer. It is at first blush obvious that no responsible person within the profession could be against such actions. However, when one introspectively examines what is involved in accomplishing such objectives, one might well be concerned with the realities involved.

Reviews of Quality Performance

I have already commented to the extent I wish on the matters of continuing education and character checks and would now like to turn to the area I know most about—that of reviews of the quality of performance of accounting firms, however structured.

For some years the AICPA has had a committee to conduct quality control reviews of accounting firms. This has been generally directed toward providing smaller practitioners with an opportunity to have their procedures and practice reviewed by others in the profession. However, this program has been quite limited—consisting of a review of only 2 or 3 days, of selected engagements, and conducted on a voluntary basis.

It was not until the SEC proposed that quality control reviews of major firms be required as a consequence of proceedings under Rule 2(e) of the rules of practice of the SEC that this matter really heated up. Subsequent to the considerations of the AICPA to assess how the profession might accommodate the wishes of the SEC, a program was developed for the AICPA to structure a voluntary quality review program which would be extended to multi-office firms.

As you know, I have been chairman of the committee to consider the SEC's request for accommodation with respect to reviews required under Rule 2(e). The charge to our committee was to consider the SEC's request and to negotiate the best accommodation that could be achieved so that the Board of Directors

could reach a conclusion as to whether the AICPA would participate in the SEC's program or not. The result of our committee effort was the "Tentative Program for an Inspection of the Quality Control Standards and Procedures of an Accounting Firm Pursuant to 2(e) of the SEC Rules of Practice." This program outlines the ground rules for conducting such an examination and was adopted by the Board of Directors with the understanding that the AICPA would participate in the examination of the first firm so charged under rule 2(e) and would also cooperate in what we call the "front end" of the next two or three firms to be so charged.

Essentially, the proposed program provides that the AICPA assemble a panel of persons from firms engaged in SEC practice; the SEC will select a chairman of a review team; the chairman will assemble, from the list, a team of reviewers; the reviewers will assess the quality standards and practices of the defendant firm; and subsequently—some 15 months later—will conduct a review to determine that firm's compliance. This is a very abbreviated statement of the plan.

This program is in the process of application at the moment with respect to Laventhol Krekstein Horwath & Horwath and is also to be applied to Touche Ross & Co. I also understand that two other members of the Big 8 are in the process of negotiating a similar deal. Of course, you realize that this program was proposed by the SEC as an alternative to a suspension from practice before the SEC which could be disastrous for any firm if the suspension was for any significant period of time. I should say that throughout all our deliberations, our committee never had any reason to question the sincerity of SEC staff motives in advocating this program.

Our committee "backed into" a recommendation that the AICPA should accommodate the SEC in the first of such reviews, recognizing the onerous alternatives, and also recognizing that a major firm had already made a commitment to accept this treatment.

Legal and Other Problems

Now you should realize that there are very many difficult, unique legal questions involved in this type of exercise. I don't intend to attempt to identify or discuss all these legal questions except to point out that they involve matters of confidentiality, matters of discovery in litigation involving any of the clients of a given firm, the legal position of those serving as quality control reviewers, the legal problems of the AICPA, etc. The SEC staff has been largely disinterested in our legal problems associated with the program, and has expressed the attitude that we should forget our legal problems and get on with the job. In our committe's final report to the Board of Directors in January 1974, we expressed a number of serious reservations regarding this program. Among these reservations were:

- The SEC provides, in the LKH&H case, that a quality control review is to be conducted by persons selected from a panel put up by the AICPA, or by accountants selected by the SEC from the total population of accountants, or by the staff of the SEC. Our committee concluded that a peer review by persons practicing in the accounting profession and selected by the AICPA was by far the preferable approach.

- The SEC provides that a quality assurance review may result from:

—A Court Order and Consent Decree as provided in the LKH&H case,

—By a negotiated settlement of a 2(e) proceeding with a given firm without benefit of a court order and consent decree, which is the Touche Ross situation, or

—Simply by the SEC advising a given firm that while they do not intend at the moment to initiate a 2(e) proceeding, their view of the quality of performance of that firm would suggest that they voluntarily submit themselves to such a review.

You should recognize that the legal problems involved in these three types of reviews are most significant and any review without the benefit of participation of the Court leaves the reviewed firm and other parties in a significantly vulnerable legal situation.

- Our committee was quite concerned with the fact that the profession has never established generally accepted quality control standards of practice. This is a most complex subject considering the differences in type and size of practice among accounting firms and makes it quite difficult to establish universally applicable generalizations. The Auditing Standards Executive Committee of the Institute has this item on their agenda, but based upon past experience with Institute projects I would not expect to see any final product very soon. In the LKH&H case the consent decree includes by reference a statement of the quality control organization, procedures, and methods that they agree to apply. I must say that I have read this document and it prescribes about all the apparatus anyone could visualize. The tentative program negotiated by our committee with the SEC prescribes that in the future cases the review team will inspect the firm coincident with the 2(e) action to develop the prescribed quality practices applicable in that firm's situation and then return some 15 months later to inspect for compliance. We had considerable concern with the SEC prescribing quality control procedures from the standpoint that each successive case could add layer on layer of quality control procedures that could constitute a body of precedent that could prove to be unreasonable and could be applied against any given firm in a matter of litigation. We suggested that qualified practitioners are the ones that should prescribe quality control practices and remedies.

- Our committee had a fundamental concern whether the proposed program would in fact accomplish the objective of improving the quality control performance of a given firm. We concluded that in the first instance, quality of performance depends on a firm establishing a conscientious policy of high standards—a professional rather than a commercial attitude toward its practice. In the last analysis, quality of performance is attributable to the competence of a staff accountant and his supervision in performing all aspects of an audit and whether such competence, if it existed, was conscientiously applied. Therefore a program such as that proposed, consisting of a post-review of working papers, reports, etc., has inherent limitations in assessing the fundamentals of a firm's quality of performance.

Problems and Limitations of Review Programs

What I am trying to convey is the feeling of our committee that a post-review of performance may be more of a facade than an exercise of substance. In fact, during our committee's deliberations we adopted the code name "chicken soup." (For those of you who have not come from Brooklyn, chicken soup refers to a Jewish mother's practice of preparing chicken soup whenever a member of the family is ill—not because chicken soup is going to do any good, but at least she is doing something, and it is not going to do the patient any harm.)

Many aspects of the audit process are essentially predictive and therefore judgmental in nature. Our committee concluded that an analysis of the causes of audit or reporting failure would disclose that such failures are generally a matter of the judgments applied during the process rather than procedural matters, and a quality control program *per se* would have limited effect in curing the causes of poor results.

We concluded that good control procedures do not necessarily insure good audits and good auditors may function effectively in an environment with poor quality controls.

The Committee's Views on Quality Control Review

We were quite positive in our contention that a quality control review of selected audits in a given organization should be to establish whether there is confidence that the firm is applying the procedures it agreed to apply, rather than to second-guess the actions of the reviewed firm in a given instance; also, the environment of the review is one where the applicable rules and standards are in a constant state of flux. In other words, we were not disposed to offer the SEC a service wherein the reviewers would be expected to second-guess audit results and report them to the SEC.

During the early discussion with the SEC our committee proposed that a more regular procedure for quality control reviews would be for the SEC to select a firm of CPAs to review the practices of the defendant firm on the basis of a regular professional engagement between firms for that purpose. Our committee continues to believe that the firm-to-firm approach has distinct advantages in providing a professional level relationship wherein reviewers would have access to the resources of their firm as in any other engagement; participants would function under the usual protection of their firms regarding legal liability and other matters; and the organizational and administrative problems associated with such an exercise would be minimized. Firms have greater strength as professional performers than do individual practitioners. Separating reviewers from their firms for purposes of these special reviews, weakens rather than strengthens the effort. However, the firm-to-firm approach was not acceptable to the SEC and I suspect that attitude reflected a desire to strengthen their public relations posture.

As a practical matter, the use of a panel of practitioners from various firms put up by the AICPA represents an inherent problem wherein, in due course, panel members will come from firms that have previously been subject to quality reviews. I believe it is realistic to recognize that in today's environment all of

the major firms with a substantive SEC practice will in due course get "hit" with a quality control review.

We recognize that today every relationship in our society is suspect of a conflict of interest. However, we would like to think that not everyone's motives are so suspect that the more normal and professional approach of a firm-to-firm review should not be acceptable.

There was considerable discussion with the SEC concerning the responsibilities of the reviewers, should they encounter what appeared to be errors in a particular engagement inspected during the course of a review. We proposed that the reviewer's responsibility would be to report such apparent errors to the firm under review and that they should have the responsibility to assess their course of action regarding disclosure to the SEC as they would in the event they themselves discovered an error. This approach was not acceptable to the SEC and the tentative program provides that such errors, should they be material with respect to adequate disclosure to the investigating public, must be reported to the SEC by the reviewers. This is but one aspect of the larger problem of whether the AICPA quality review program is to become a part of the SEC enforcement apparatus or not.

There was also discussion and negotiation about whether the reviewers would be asked to select and pursue engagements of a firm that were of particular interest to the SEC. We hope that our understanding is that the review of any particular engagement is a matter of selection by the reviewers and their purpose is to review the engagement to assess the application of a firm's quality control procedures rather than to second-guess the appropriateness of the accounting and reporting resulting from a given audit.

Confidentiality and Legal Problems

Our early discussions with the SEC and with AICPA legal counsel were concerned with matters of confidentiality and the legal position of the various parties involved. As the discussions progressed, the legal protections applicable in this program became more and more vague and less and less protective—but then we are in an unexplored area, so I can understand why the legal questions are so much in doubt. You can be sure that once this type of inspection process is initiated a standard question in any legal action involving CPA firms will be whether a given firm has been subject to a quality review and there will be an attempt to disclose the reviewers' report and their working papers even though the particular case at hand involves a particular client rather than the overall practices of a firm. The SEC has said that the working papers and reports resulting from a quality review can never be destroyed without their permission and that they would be disposed to disclose this material to any litigant who has, in their judgment, a legitimate interest in the performance of the firm. This has got to be a new adventure, which added to all of the legal action currently going on involving accounting firms must cause some of us to pause. Our committee believes that this quality control exercise could certainly not be expected to lessen the legal actions against accountants but only add grist to the mill. In my view, the severe penalties associated with any firm's failure to perform effectively are already so onerous that no additional motivations are

required to encourage firms of accountants to give priority attention to the quality of their performance.

Conclusion

So this is where we stand at the moment. The Board of Directors has authorized the AICPA to put up a panel of reviewers to conduct the first review of LKH&H and to do the front end of the next 2 or 3 cases. A panel has been established, and one of my partners has been selected as the chairman of the first review team. What the motivation for this selection was, I do not know, but I would like to think that my partner was selected because our firm is not now high on the list of those to be reviewed. In any event, the first review will be conducted, and the Board of Directors has reserved the right to reassess this whole exercise in the light of the experience gained on the Laventhol matter.

I should also add that our committee was asked to consider the formulation of a voluntary review program of multi-office firms sponsored by the AICPA. For many of the reasons already noted, our committee rejected this proposal out-of-hand. Subsequently, a new committee was appointed under the chairmanship of Tom Holton of Peat, Marwick, Mitchell & Co., which has now developed a voluntary program which is under consideration by the Board of Directors. Whether or not such a voluntary program will fly remains to be seen. I really don't know how much "chicken soup" the Institute should be brewing on the quality control matter, but if anyone thinks that a voluntary program established by the AICPA is going to blunt the thrust of the SEC's interest in demonstrating that they are performing the regulatory role, I believe they are "whistling Dixie."

4

Relationship of Auditing Standards To Detection of Fraud

George R. Catlett

Arthur Andersen & Co.

The accounting profession is facing a wide diversity of difficult challenges. One of the current problems facing CPAs in public practice is how to achieve a proper understanding on the part of the public and others of 1) the relationship of auditing standards to the detection of fraud, and 2) the responsibilities of auditors for the detection of fraud.

Nature of Fraud

Dishonesty and deceit have always been present to some degree not only in the business community but in all walks of life. However, fraud in business enterprises has been increasing in recent years. While most managements and employees are honest, there are enough material cases of dishonesty to cause concern among independent auditors.

Fifteen years ago, most accounting firms had only an occasional fraud case, and many of those were not of any great significance. Today, with fraud cases becoming more common, and with investigations by governmental agencies and resulting litigation exploding in all directions, this disturbing trend is becoming a major factor in the operation of accounting firms. Some of the reasons for this situation are interesting, but time limitations do not permit us to discuss that topic.

What constitutes fraud is not always clear. In cases of bankruptcies and failures, fraud is sometimes alleged when what really may have occurred was bad management decisions and/or adverse business conditions, with a resulting loss of money by investors and creditors. The tendency to allege "fraud" under these circumstances frequently seems to be irresistible. In any event, what is referred to as "fraud" in some cases may not actually be "fraud."

Legal liability of independent auditors for alleged negligence and other deficiencies in their work has many ramifications. Mr. A. A. Sommer, Jr., now a Commissioner of the SEC, discussed this area at the Symposium here in 1972. The number of court cases involving the question of whether and under what circumstances an auditor may have legal liability is still somewhat limited; but more such cases will probably go to trial in the next few years, and the guidelines may become clearer than they are at the present time.

Many different kinds and magnitudes of fraud exist, with some not affecting the financial statements at all or only in a minor way, while others have a

material effect on the financial statements. Some examples of the various types of fraud are:

1. Misappropriation of assets.
2. Overstatement of assets or understatement of liabilities to present more favorable financial position and/or results of operations.
3. Siphoning off of assets through transactions with affiliated entities or in other ways.
4. "Kickbacks" and other irregular transactions between officers or employees of an enterprise and outside parties.
5. Lack of disclosure of significant information.

Fraud in a business entity may be covered up in many ways, but major cases usually include collusion among officers and/or employees, or collusion with outside persons. The cover-up may involve false accounting entries or misleading information, forgeries, unrecorded transactions, or other such means.

Responsibilities of Management

Management has the primary responsiblity for the use and safeguarding of corporate assets and the incurrence of liabilities of the business enterprise on behalf of the stockholders. An additional responsibility runs to creditors and other parties and agencies with a legitimate interest in the enterprise.

The responsibilities of the board of directors in monitoring the management are becoming of increasing concern to many directors, particularly the outside directors. Even though the directors, as representatives of the stockholders, review or approve management actions in various ways, the responsibilities of directors for various kinds of management fraud are still somewhat undefined from a legal standpoint.

One of the important functions of management is the establishment of an adequate accounting system along with appropriate administrative and internal accounting controls and the necessary internal auditing. The resulting financial statements are the direct representations of management, setting forth the financial position and results of operations of the enterprise along with the necessary disclosures for interpretation of the financial statements.

Primary reliance for the prevention and detection of fraud should be placed on an adequate system of internal control because such a system is in constant operation and covers a great many periods and transactions when the independent auditor is not present. It is not feasible for the auditor to check these transactions later in any detail. Management should realize that a good system of internal control can be circumvented by collusion among employees or by collusion between one or more employees and persons outside the enterprise. This possibility must be considered by management, and internal auditing is an additional safeguard.

When collusion to circumvent the accounting system is directed by management, an additional and complicating dimension is added to the problem of deciding when and how an auditor might detect fraud, assuming that generally accepted auditing standards have been followed.

Managements involved in some fraud cases have been held legally responsible from a civil and/or criminal standpoint. However, the number of cases is

disturbing in which the independent auditor appears to be the main "target" in governmental investigations and class action suits rather than the individuals who perpetrated the fraud.

Present Auditing Standards

What effect, if any, should recent fraud cases and the resulting governmental investigations and litigation have on auditing standards? Are the present standards satisfactory? Have we learned as much as we should have from our experiences? Have the fraud situations gone undetected by auditors because of ineffective work or inadequate auditing standards; or has the cause been fraudulent concealment by management or other actions not detectable by normally appropriate auditing procedures? The answers to these and many other related questions are not self-evident.

The auditor should constantly exercise his professional judgment in deciding whether it is reasonable to assume that he has all the pertinent facts and what auditing standards and procedures are necessary in attempting to obtain the facts. Auditing cannot be done entirely by rules and forms.

The greater use of electronic computers and all sorts of sophisticated equipment for accounting and related purposes also represents new challenges in developing audit techniques. Some of the basic concepts of auditing may be changed. However, the standards of auditing should not be thwarted by equipment. People, not machines, commit fraud.

The AICPA has a special committee reviewing the Equity Funding case to determine whether in the light of that case consideration should be given by the AICPA to possible changes in any auditing standards and procedures. The report of that committee has not been issued.

The most authoritative statement by the AICPA of the independent auditor's responsibility for the detection of fraud is set forth in Statement on Auditing Standards No. 1 (paragraphs 110.05-110.08), and this is quoted in Appendix A.

Chapter 6, "Due Audit Care," from *The Philosophy of Auditing* by Mautz and Sharaf, contains this statement: "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 uncover." A summary of some of the views expressed in that chapter is quoted in Appendix B.

The membership of the AICPA adopted ten standards that are referred to as "generally accepted auditing standards," and these are classified as general standards, standards of field work, and standards of reporting. These standards contain such requirements as technical training and proficiency, independence, due professional care, adequate planning, proper study and evaluation of internal control, and sufficient competent evidential matter. Careful distinction should be drawn between these "auditing standards" and the "auditing procedures" to be selected and executed in accordance with the standards.

All of the items referred to above are well written and pertinent to the subject under discussion. When we relate what is said in those documents to the situation in which the accounting profession finds itself today, it is evident that controversial questions and misunderstandings exist.

Internal Control

Internal control, for many reasons, has become an increasingly important factor in the conduct of audits. The AICPA second standard of field work states: "There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted."

The evolution in auditing over many years in the direction of greater reliance on internal controls and the use of test-checking in reviewing those controls is not just a theoretical or philosophical development. This trend is the result of practical necessity. With the large business enterprises that now exist, detailed auditing to any significant extent is not economically feasible.

When there are millions of transactions in a single enterprise in a year, an auditor must rely on test-checks for much of his work. Therefore, the effectiveness of the accounting system and internal controls and the integrity of management are crucial to the auditor.

Most of the significant fraud cases publicized in the financial press are the result of a breakdown in internal control as a result of management direction, collusion of officers and/or employees, deterioration of internal control from neglect, or a combination of these and similar factors.

The auditor's evaluation of internal control is an important phase of an audit engagement. Management has a responsibility to its shareholders to see that adequate internal control exists. An absence of adequate control raises a serious question; one to which professional judgment must be applied as to whether the auditor can compensate by expanding the scope of his work or should withdraw from the engagement.

Representations by Clients

Representations by management and employees take many forms in the conduct of an audit. If an auditor is precluded from relying on such representations and should be required to assume that all of them are wrong until he can prove them correct, an audit would have to be viewed from a vastly different perspective. An auditor certainly does not accept all information and data given to him by a client without question. On the other hand, when an auditor is given misinformation or information is withheld without his knowledge, there are limits to the steps he should be expected to take to find something he does not know exists. If each audit is to be approached with the viewpoint that the client is dishonest until proven otherwise, not only would an entirely new approach be needed but also the auditor may well be placed in an untenable position.

The credibility and integrity of management are an important factor for an auditor to assess in the conduct of his work. If the auditor finds that a management does not have sufficient integrity to rely on its representations, he is running a serious risk that frequently cannot adequately be dealt with by an extension or expansion of the audit procedures. On the other hand, an auditor may assume that integrity exists and then find to his dismay that his trust and confidence in this regard were misplaced.

Auditors do have responsibilities in the conduct of an audit, but these

responsibilities do not include infallibility or clairvoyance. Management should be held responsible for misrepresentations and withholding of material matters from the auditor. An auditor should not be held responsible when he follows customary auditing procedures, those procedures do not disclose the deception, and no apparent reason exists to expand the customary audit procedures.

What are Some of the Pertinent Questions?

A few pertinent questions regarding auditing standards and procedures as they relate to the detection of fraud are set forth below in order to serve as a basis for discussion.

The first question is: Should an unqualified auditor's opinion be construed to constitute a representation that there is no undetected fraud having a material effect on the financial statements?

A second and somewhat related question is: Should an auditor be held to be a "guarantor" of the financial statements or of the fairness with which they are presented insofar as fraud is concerned? Put another way, should the auditor be held to have a joint responsibility with the management for the financial statements in this regard?

The third question is: Can fraud become so extensive or massive that the answers to the first two questions are different?

A fourth question, especially if the first two are answered affirmatively, is: Are any basic changes needed in current auditing standards and procedures?

A fifth question is: Should auditors rate clients as to quality and take only the better ones? If so, what are the criteria for this purpose?

A further question is: Should legislation be passed establishing greater responsibility on the part of everyone not to intentially mislead auditors?

I will not try as a part of my formal remarks to answer these questions in detail, but I will make a few comments on them.

Hindsight is a wonderful faculty. There is no area in which hindsight is more readily applied than to undetected fraud after such fraud is later discovered. It inevitably seems to appear obvious that the fraud should have been detected. The circumstances at the time are most difficult to recreate and comprehend, and little effort is really made to do so. Second-guessing becomes prevalent, and the less experience or knowledge one has about auditing, the more certain one becomes of the righteousness of his condemnation. Subsequently judging the effectiveness of a professional person in doing his work under the stress and strain and actual conditions at the time should not be taken lightly.

Auditors should not be presumed to have represented or guaranteed that no undetected fraud exists or to have guaranteed that the financial statements are a fair presentation of the financial position and results of operations. Those who suggest that the auditor has a joint, and presumably equal, responsibility with management for the financial statements do not in my view understand the relative roles of management and the auditor. There is no more justification for an auditor to be a guarantor than there would be for a lawyer to guarantee that he will win a lawsuit or a doctor to guarantee that an operation will be successful. A lawyer does not have a joint responsibility for a client's morals, and a doctor does not have a joint responsibility for a patient's health habits.

Insofar as the extent or massiveness of a fraud is concerned, about all to be said about this is that the larger the fraud the more likely it is to be detected by the auditor in following proper audit procedures. However, counter forces to detection may be the extent of the collusion inside and outside of the enterprise, the existence of expert forgery, or other sophisticated deterrents to detection.

Generally accepted auditing standards and procedures should be constantly reevaluated in the light of improved knowledge and current developments. This should be done by the accounting profession and by accounting firms. As an example, some of our past ideas in this regard may be changed by computers. Some improvements can undoubtedly be made in auditing techniques and procedures, but I see no particular evidence that any revolutionary change is needed in the standards.

Our free-enterprise system will be hampered and the tradition of opportunity for all will be affected, if the accounting firms decide only to perform audit services for "safe" clients. A relatively new enterprise with a first-time registration statement is frequently of greater risk for an auditor than an established business. The new enterprise is more likely to result in failure or disillusioned investors. However, the public interest may not best be served if auditors are forced to avoid such risks. The auditor should be able to perform a professional service for these entitles in a proper manner without being subjected to the threat of a lawsuit whenever one of them fails.

As to whether legislation is desirable with respect to putting greater penalties on misleading the duly appointed auditors of a company, many factors are involved. I would not advocate such legislation at this time, but something needs to be done to protect the auditor, who all too frequently is left "holding the bag" as a result of management misconduct.

Auditors are well aware that fraud can occur. They are also concerned about the possibility of fraud being so material as to have a significant effect on the financial statements upon which they are reporting. On the other hand, the accounting profession must not permit itself to be destroyed by assuming responsibilities or accepting a role that cannot be successfully fulfilled.

Appendix A

Extract from Statement on Auditing Standards No. 1, American Institute of Certified Public Accountants (1973)

110 Responsibilities and Functions of the Independent Auditor

Detection of Fraud

.05 In making the ordinary examination, the independent auditor is aware of the possibility that fraud may exist. Financial statements may be misstated as the result of defalcations and similar irregularities, or deliberate misrepresentation by management, or both. The auditor recognizes that fraud, if sufficiently material, may affect his opinion on the financial statements, and his examination, made in accordance with generally accepted auditing standards, gives consideration to this possibility. However, the ordinary examination directed 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 misrepresentation by management is usually more closely associated with the objective of the ordinary examination, such examination cannot be relied upon to assure its discovery. The responsibility of the independent auditor for failure to detect fraud (which responsibility differs as to clients and others) arises only when such failure clearly results from failure to comply with generally accepted auditing standards.

.06 Reliance for the prevention and detection of fraud should be placed principally upon an adequate accounting system with appropriate internal control. The well-established practice of the independent auditor of evaluating the adequacy and effectiveness of the system of internal control by testing the accounting records and related data and by relying on such evaluation for the selection and timing of his other auditing procedures has generally proved sufficient for making an adequate examination. If an objective of an independent auditor's examination were the discovery of all fraud, he would have to extend his work to a point where its cost would be prohibitive. Even then he could not give assurance that all types of fraud had been detected, or that none existed, because items such as unrecorded transactions, forgeries, and collusive fraud would not necessarily be uncovered. Acordingly, it is generally recognized that good internal control and fidelity bonds provide protection more economically and effectively. In the case of fidelity bonds, protection is afforded not only by the indemnification for discovered defalcations but also by the possible deterrent effect upon employees; the presence of fidelity bonds, however, should not affect the scope of the auditor's examination.

.07 When an independent auditor's examination leading to an opinion on financial statements discloses specific circumstances that make him suspect that

fraud may exist, he should decide whether the fraud, if in fact it should exist, might be of such magnitude as to affect his opinion on the financial statements. If the independent auditor believes that fraud so material as to affect his opinion may have occurred, he should reach an understanding with the proper representatives of the client as to whether the auditor or the client, subject to the auditor's review, is to make the investigation necessary to determine whether fraud has in fact occurred, and, if so, the amount thereof. If, on the other hand, the independent auditor concludes that any such fraud could not be so material as to affect his opinion, he should refer the matter to the proper representatives of the client with the recommendation that it be pursued to a conclusion. For example, frauds involving "lapping" accounts receivable collections, or frauds involving overstatements of inventory, could be material, while those involving peculations from a small imprest fund would normally be of little significance because the operation and size of the fund tend to establish a limitation.

.08 The subsequent discovery that fraud existed during the period covered by the independent auditor's examination does not of itself indicate negligence on his part. He is not an insurer or guarantor; if his examination was made with due professional skill and care in accordance with generally accepted auditing standards, he has fulfilled all of the obligations implicit in his undertaking.

Appendix B

Extract from R. K. Mautz and Hussein A. Sharaf,
***The Philosophy of Auditing,* American Accounting Association, 1961**

Chapter 6—Due Audit Care, pp. 139-140

Summary. In this chapter we have tried to establish a concept of due audit care as the basis for judging the responsibility of independent auditors in the performance of their professional duties. This concept is based on an assumed prudent practitioner and the knowledge, skill, caution, and responsiveness that could be expected from him under the circumstances at issue. The usefulness of such a concept seems clear. If it can be developed, it will give to all concerned with the subject a more explicit statement than is now available in the literature.

The difficulty of formulating such a concept is closely related to the problem of irregularity detection. There are some irregularities which should be discovered in any standard examination; the obligation of discovering certain other irregularities would be so onerous a burden as to be unbearable. Between these extremes are perhaps innumerable cases varying from one extreme to the other. We are unable to find in the characteristics of irregularities themselves any significant clues which permit a precise statement of audit responsibility for detection. This leads us naturally and inevitably to consideration of the legal doctrine of a prudent man and its application to auditing.

It must be recognized that a concept of due audit care, founded on the legal concept of a prudent man acting reasonably with average knowledge and average judgment in the specific circumstances, cannot give us objective advance answers to the question of responsibility in any given case. We feel it does give a useful criterion to the auditor himself and to those who must judge the quality of his work, a criterion which will increase in usefulness as experience sharpens and strengthens the concept itself.

We also believe that a statement indicating the extent of responsibility accepted can be formulated in a manner that will make its usefulness apparent, both to practitioners in their daily affairs and to the profession as an indication of acceptance of its just and fair responsibilities. Like development of the concept of due audit care, this may take some time, but it is a worthy endeavor and will repay the effort. As a beginning, we suggest the following summary. It will be apparent to the careful reader that its component ideas have been borrowed from a variety of sources.

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 uncover. A prudent practitioner is assumed to have a knowledge of the philosophy and practice of auditing, to have the degree of training, experience, and skill common to the average independent auditor, to have the ability to recognize indications or irregularities, and to keep

abreast of developments in the perpetration and detection of irregularities. Due audit care requires the auditor to acquaint himself with the company under examination, its method of operation and any significant practices peculiar to it or the industry of which it is a part, to review the method of internal control operating in the company under examination by inquiry and such other methods as are desirable, to obtain any knowledge readily available which is pertinent to the accounting and financial problems of the company under examination, to be responsive to unusual events and unfamiliar circumstances, to persist until he has eliminated from his own mind any reasonable doubts he may have about the existence of material irregularities, and to exercise caution in instructing his assistants and reviewing their work.

Discussant's Response to Relationship of Auditing Standards To Detection of Fraud

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I believe it fair to begin by summarizing George Catlett's paper as an affirmation of the conventional wisdom of the accounting profession. Adherence to the standards of a profession must always be seen by responsible citizens as admirable, and therefore criticism is difficult. In this regard, I will not present esoteric criticism that sometimes characterizes the remarks of teachers in situations such as this, nor will I dwell at length on selected statements in the paper. However, if you will indulge me, I wish to respond to one statement because it sets a tone for the paper and for the conventional wisdom of the profession which I would like to see changed. Under the heading "Representations by Clients," the following statement can be found: "[Auditors'] . . . responsibilities do not include infallibility or clairvoyance."

"Responsibilities" of CPAs

In this statement, as well as in many other parts of the paper, either explicitly or implicitly, Catlett suggests that the detection of fraud could become a "responsibility" and an onerous one at that. Presently it is reasonably clear, at least to accounting practitioners and students, that detection of fraud is not an objective of the ordinary examination of financial statements. However, should this objective be undertaken by CPAs, it would not necessarily constitute a new "responsibility." Should such an objective be assumed, it seems likely that it would result from a demand for service either directly from clients or indirectly from clients through a governmental or other agency charged to represent the public. Further, I might add, that assumption of such a "responsibility" should carry with it appropriate remuneration.

I am suggesting that the services or functions of a profession evolve over time and the nature of these services is dictated largely by customers who demand services and are willing to pay for them. Finally, I am also suggesting that the accounting profession should feel flattered and privileged to be asked to extend its services to a desirous public. This is, of course, a simplification of the rather complex problem of attesting to the material absence of fraud in the operations of an entity. To clarify my position, however, I would like to take up several specific topics included in the subject paper and attempt to relate them to this potential extension of the attest function.

Nature of Fraud

The paper outlines the nature of fraud in a manner that should be satisfying to most accountants. Examples of various types of fraud are listed and even these examples appear to be inclusive of the vast majority of frauds that are perpetrated. However, the paper dwells at length on cases of fraud which are concealed through collusion and tends to ignore defalcation and embezzlement by individuals. Catlett states that ". . . major cases usually include collusion among officers and/or employees, or collusion with outside persons." CPA firms certainly should be able to support a statement such as this one. I cannot, but I do know that there are many individuals now in prison who were convicted of embezzlement and who did not collude with anyone. Many of you probably will remember the study of defalcators published over 20 years ago in *The Journal of Accountancy*. The study by Donald Cressey centered on convicted defalcators incarcerated at Illinois State Prison at Joliet. Cressey's purpose was to determine the causes of defalcations. He generalized about the process of defalcation in the following way:

> Trusted persons become trust violators when: (1) they conceive of themselves as having a financial problem which is non-sharable; (2) have the knowledge or awareness that this problem can be secretly resolved by violation of the position of financial trust; and (3) are able to apply to their own conduct in that situation a verbalization which enables them to adjust their conceptions of themselves as trusted persons with their conceptions of themselves as users of the entrusted funds or property. Unless there is movement through this sequence, a trusted person does not become a violator.[1]

This study along with other studies by students of Dr. Cressey have indicated that some types of fraud do not include collusion. If an auditor were to attest to the material absence of fraud, he should consider this type of fraud as well as such misrepresentations by management as over- or under-statement of assets and liabilities and irregular and/or deceitful transactions. Presently, auditors have an excellent opportunity to uncover an individual defalcation through the review and evaluation of internal control. All pronouncements on the nature of internal control emphasize division of duties and responsibilities in a manner that prevents errors and defalcations unless collusion exists. If most perpetrators (at least those who are caught and convicted) have nonsharable problems and perpetrate embezzlements with no collusive help, the auditor should be able to discern weaknesses in the control system which could allow for the existence of such fraud with the use of current internal control evaluation standards and procedures.

Audit Objectives

Apparently, some frauds involve collusive arrangements, but some do not. It would seem that all should be included in any definition of fraud if a stance is taken on the subject of attesting to the material absence of fraud. However, a more important consideration to this discussion concerns objectives of audits. Historically, these objectives have changed. Brown suggests that the detection of fraud was recognized as a major audit objective until at least 1940.[2] He

also indicates that beginning around the turn of the century fairness began to overshadow detection of fraud as a stated audit objective, and that detection of fraud seemed to disappear as a stated audit objective around 1940 due largely to the effect on the profession of the McKesson & Robbins case. Perhaps the discussion of the auditor's responsibility for the detection of fraud has not yet diminished because it was a stated audit objective for over 400 years and was removed as an objective by the profession rather than by a change in demand of clients of accounting firms. A solicitous consuming public could reinstate it. If this were to happen, the terms might be more advantageous for CPAs than they were during the period previous to the McKesson & Robbins case.

The detection of fraud as an audit objective might resurface as a part of the ordinary examination of financial statements or as a special examination of financial statements. Recently there has been much more interest in attestation of representations other than those which appear in historical financial statements. Forecasts and interim financial statements are two possible extensions of the attest function that are of current interest to the profession.

Whether the potential extension of the auditor's opinion is forecasts, interim financial statements, or detection of fraud, history indicates that the process will evolve slowly over time. Any extension probably will not result from a sudden pronouncement of the AICPA; instead, any such pronouncement will follow rather widespread practice in the field. Should detection of fraud again become a stated audit objective, either as a part of the ordinary examination of financial statements or through a demand for special reports asserting the absence of fraud, auditing standards must be judged for their appropriateness to the task.

Auditing Standards

Current general and field work standards seem to apply equally well to audits of financial statements and to audits designed to detect the existence of fraud. As mentioned earlier, the requirement for review and evaluation of internal control should ferret out all but the most insignificant embezzlement or defalcation perpetrated by a lone individual. The search for other types of fraud seems to be covered by the third standard of field work which requires "sufficient competent evidential matter." That standard goes on to indicate that this evidence should be obtained "through inspection, observation, inquiries, and confirmations." All of the types of fraud that result from situations other than "nonsharable problems" are transaction based. Purchases, sales, cash receipts, and cash disbursements are recorded and result in balances that appear in accounts. If the balances are incorrect due to fraud, evidence of that fraud should be available. This evidence may not always be conclusive, as sometimes seems to be true in the ordinary examination of financial statements. Nevertheless, some evidence will exist.

Because accounting data are transaction based, evidence theory indicates that auditors should corroborate client representations by obtaining information from the other party to the transaction or a third independent party such as a bank. Evidence is gathered by auditors in the field by applying this theory through the use of confirmations (a direct means) and such things as examination of invoices and cancelled checks (an indirect means). In summary, auditing

standards seem broad enough to encompass audits for the purpose of detection of fraud.

In most of the fraud cases that are covered in the literature there are problems of interpretation of auditing standards, and in a few cases, apparent violations of them. As Mr. Catlett suggests, standards must be distinguished from procedures and I would suggest that it is procedures used in applying standards that might have to be changed should fraud detection become an objective of either a special examination or the ordinary examination of financial statements.

Auditing Procedures

The changes that should occur in audit procedures are really changes that should occur whether or not fraud detection becomes an objective of the ordinary examination. To discover any characteristic of a population of data, sampling techniques can be used. Discovery sampling, for example, seems particularly appropriate to investigation of potential frauds. Discovery sampling is not particularly helpful in situations where fraudulent transactions or behavior constitute an extremely minor percent of the transactions or behavior experienced in an organization. However, if fraud is material, such techniques could be helpful.

Scientific sampling currently is very helpful in the ordinary examination of financial statements. The characteristics of interest are different, but the purpose is identical: to discover characteristics and assess their importance. It is difficult to assess the degree to which statistical sampling is utilized by auditors, but it seems clear from the literature that it is far more reliable than judgment sampling techniques. Should detection of fraud become an objective of the auditor's examination, scientific sampling certainly would have to be used in order to assess the risk taken in attesting to the absence of material fraud. Also, an auditor should be interested in assessing the risk he is now taking in his opinion on financial statements for an ordinary examination where fraud is explicitly denied as an objective.

One additional example of an audit procedure that might change should fraud again become an audit objective is confirmation. It is my understanding that negative confirmation requests are still quite prevalent in spite of the fact that when an auditor does not receive a reply from a request, he has no basis for determining whether the amount to be confirmed is correct or the respondent is nonexistent, uninterested, or unresponsive. In an audit of accounts receivable, if confirmation requests were sent and the objective were to determine whether the accounts receivable were fraudulently stated, I do not believe that many auditors would want to rely on the use of negative confirmations. Instead, positive confirmations would be utilized with careful and extensive followup. Again, I would suggest that such procedure would be appropriate in the ordinary examination where the objective is not detection of fraud; however, it becomes much more important when the objective is detection of fraud.

Professional Audit Service

Earlier, it was suggested that the use of the term "responsibility" perhaps was inappropriate. Instead it was suggested that demands for CPAs' services should be treated as opportunities and privileges to serve society. When such

requests are made, they represent recognition by society that CPAs have the competence and the integrity to perform the services requested. Competence often is brought into arguments against extension of the attest function to other areas. In such arguments it is suggested that the competence of CPAs lies in their abilities as accountants and that to attest anything or offer a service that is outside of the field that has been known traditionally as accounting would be to engage in services beyond their abilities and that therefore the public might lose confidence. This, of course, could happen; however, in my opinion CPAs will not seek out engagements in which they must offer a service that they have not offered previously. Rather, society will ask CPAs to provide the new service. This has happened in many instances over the years to the extent that management services departments of CPA firms engage in salary surveys, executive search and other activities that cannot be considered, even remotely, as traditional accounting services. Thus far, no consequent loss of public confidence has occurred.

Although I am not a practitioner, I think there is one change that should be made in the practice of public accounting, should requests for extensions of the attest function and other services be made by the public. In almost every profession, some allowance is made in the fee structure for the relative risk involved. Delicate surgical operations are more expensive than routine low-risk surgical operations. With the possible exception of some securities registrations, CPAs apparently have not built into their billing structures any allowance for risk that might be present in a given engagement. Should CPAs be asked to attest to the absence or presence of material fraud, it would seem wise to adjust billing methods to allow for risks being undertaken. Again, there is a parallel to attestation of financial statements. Given current litigation against accountants, it would seem appropriate for CPAs to assess risk in each ordinary engagement and adjust the fee according to the estimate of the risk to be undertaken.

Conclusion

Services or functions of any profession evolve over time and should be seen as opportunities or privileges. At the same time, professionals should assess the value of their services and the risks that may be involved and bill clients accordingly. Furthermore, historically, audit examinations with some stated objective have been undertaken before standards were developed. As indicated previously, Brown asserted in his article that audits occurred prior to the year 1500 and were carried on for hundreds of years before auditing standards were developed. A more recent example is that of attesting to some aspects of forecasts. Such services have been performed and are being performed now by CPAs without any explicit standards. Therefore, I think it is unreasonable to assume that standards should be developed before examinations with the stated objective of detection of fraud can be undertaken.

Finally, there is one important suggestion that comes from this paper. Mr. Catlett made assertions about the nature of fraud which can be substantiated through research. If there is client interest in attestation to the absence or existence of material fraud, research should be undertaken in the area. Almost all CPA firms maintain files with experiences catalogued in many different ways. As a first step, it would be interesting to examine the files of CPA firms catalog-

ing all types of fraud that have been discovered either during the course of an examination or afterward. A classification system for this examination might include type of fraud, method of concealment, industry, client size, and the circumstances surrounding the discovery of the fraud. Only after extensive research of this type can the profession properly assess the likelihood of discovery of fraud and the risk the CPA is taking when he attests to the absence of it.

Catlett's paper concludes with the following statement: ". . . the accounting profession must not permit itself to be destroyed by assuming responsibilities or accepting a role that cannot be successfuly fulfilled." I would add to that statement that the accounting profession must not permit itself to be destroyed by refusing to provide requested services to society. Destruction in this latter case will be much slower but nonetheless definite.

Footnotes

1. Donald R. Cressey, "Why Do Trusted Persons Commit Fraud? A Social-Psychological Study of Defalcators," *The Journal of Accountancy,* November 1951, pp. 577-578.
2. R. Gene Brown, "Changing Audit Objectives and Techniques," *The Accounting Review,* October 1962, pp. 696-703.

5

A Decision Theory View of Auditing

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The major objective of the field of applied statistics is to help solve decision problems in the face of uncertainty. This help has traditionally been provided by making inferences based on a probability model. These probability models are the statistician's models of the uncertainty faced by a real world problem-solver. The field of auditing has been the beneficiary over the past ten to fifteen years of increasing assistance from the field of applied statistics. This paper will review these contributions and then consider a new contribution that is a logical next step.

Dealing with Uncertainty

The auditor is continually making choices in the face of uncertainty. The first statistical recognition of this fact occurred with the use of classical statistics in evaluating the results of random sampling.[1] The significance of this approach was not that uncertainty was first recognized, but that the risks associated with one particular aspect of auditing were made explicit. That is, the classical statement of confidence interval and level (e.g., $\pm$ 50 at 95% confidence) specifies the risk of sampling error.[2] Thus one element of the uncertainty faced by an auditor with which he has always had to treat was now disclosed in statistical terms. Given this beginning contribution, expansion of the potential uses of applied statistics to auditing, comparable to other disciplines facing uncertainty, should follow.

In using classical sampling, the contribution of statistics is restricted to the evaluation of evidence obtained by random sampling. Incorporation of this evidence with other evidence is left to the auditor's judgment. More recently a method for combining sample evidence with other auditing evidence has been proposed.[3] Inferential methods in Bayesian statistics are based on a posterior probability distribution which is a combination of a prior probability distribution, representing evidence the auditor has evaluated up to the point of sampling, and a likelihood function, representing the information in the sample. By subjectively specifying the results of evidence evaluated up to a point of time as a probability function, the auditor has expanded the explicit recognition of the uncertainty he faces in carrying out an audit. Again, this uncertainty previously existed but was considered only through intuition and judgment. The advantages for the auditor that result from being more precise in considering risk have been argued by Roberts.[4]

While classical sampling methods have met with some acceptance by the auditing profession, Bayesian sampling methods have not. One major reason for this lack of acceptance is the need for a practical method of expressing the prior probability distribution. While some research has been carried out, a confidence-inspiring method still awaits development.[5] Another source of resistance to Bayesian methods is the "subjective" nature of the prior distribution. The use of classical sampling has been "sold" to some members of the auditing profession on the basis that it is more objective. Since the result of the audit process is an opinion or judgment decision, over-stating applied statistics as a source of objectivity can be misleading. Statistical methods discussed in this paper can make the parameters or bases of judgment more explicit.[6] But even if these approaches are carried to their full extent, judgment wil be required as a critical input to the model. The prior probability distribution is an example of an input based on judgment.

Both classical and Bayesian methods discussed above are methods of inference. The next logical step in the use of applied statistics is to move from inference to action. An audit action or decision can be addressed by use of statistical decision theory. This methodology requires as an input a payoff function in addition to the requirements for inference. This payoff function is a specification of the consequences of each possible outcome of the audit to the auditor. The use of this method allows the auditor to maximize in the sense that he will make the decision that has the highest expected payoff.

In addition to the problems discussed above in applying Bayesian methods, the use of decision theory also requires an auditor to specify his payoff function. For each possible outcome of the audit he must specify the "value" (possibly in monetary terms) to him.[7] In the auditor's complex environment this specification of outcome consequences will be quite difficult. For example, consider that an outcome consequence to an auditor will probably represent a combination or matching of the form of his opinion and the discovery or lack thereof of a material error with the reaction of the firm (fee bargaining, lawsuits, future business), the reaction of users (lawsuits), the reactions of the regulators (right to practice, criminal prosecution), and the reaction of the rest of the auditor's environment (professional regulation, loss of other clients).

The remainder of this paper will illustrate the application of decision theory to a relatively constrained audit decision followed by a discussion of the problems involved in relaxing the constraints and the related need for research. Some discussion of the reasons for the author's bias that such inquiry is needed is incorporated in these comments.

A Decision Theory Model

Audit decision making can be described as a series of choices beginning with the acceptance of the client, followed by a series of choices as to type and quantity of evidence, and may conclude with the choice of opinion. The evolution of these choices is likely to be complex. For purposes of this discussion a single artificially isolated audit decision will be modeled.

Suppose an audit of a single balance, B, such that $\sum_{i=1}^{100} b_i = B$. The

auditor's choice in this examination is to give either a clean opinion (a_1), or require an adjustment (a_2), to B. The existence (s_1), or absence (s_2), of a "material error" in B is the criterion which the auditor wishes to employ. This specification of possible actions, a_i, and states of the balance, s_i, provides the basis for the construction of a payoff table as follows:

	Error S_1	No error S_2
Clean opinion a_1		
Adjustment a_2		

In this payoff table the auditor will put the consequences or payoffs to him of each action-state combination. The objective at this point is to choose payoffs that, while arbitrary, have some intuitive appeal. The values in the following table represent dollars (in thousands).[8]

	S_1	S_2
Clean opinion a_1	−20	7
Adjustment a_2	3	−1

The $7,000 amount in the no error-clean opinion combination represents the fee net of ordinary expenses and is usually the most desired outcome. The no error adjustment combination is −$1,000 because it is assumed that the adjustment involves extra audit work for which the client will not pay. The $3,000 amount in the error adjustment combination represents extra work that in part is billed and collected from the client. The −$20,000 for the error clean opinion combination represents the impact of a settlement with the client (or a third party) to not pursue a suit for negligence.

The auditor plans to sample for evidence regarding the balance but before doing so, assesses his prior belief regarding the balance he is examining. Based on his knowledge of the client and of the system generating the balance, he states that S_1, a material error, has a .10 chance of existing and S_2 an absence of a material error, has a .90 chance of existing.

At this point the auditor could decide to not sample and simply make a choice based on his prior probability distribution and his payoff function as stated in the payoff table. (Such a decision might be correct in decision theory, but the auditor must also respond to professional conventions which will require at least some testing.) The criterion for choice is to select the action with the highest expected value. Using the auditor's prior probability distribution, these expected values are as follows:

$$E(a_1) = E(\text{clean opinion}) = .1(-20) + .9(7) = 4.3$$

$$E(a_2) = E(\text{adjustment}) = .1(3) + .9(-1) = -.6$$

The decision indicated at this point is a clean opinion.

The auditor's next step is to collect additional evidence and modify his prior distribution. In obtaining and using sample evidence in a decision theory framework some basic tools have been developed. The first is called the expected value of perfect information (EVPI). It indicates the upper limit on the value and thereby the amount that should be spent for additional information. The EVPI is computed by summing the values of the best action for each state, S_i, weighted by its probability of occurring and then deducting the value or payoff of the best decision (a clean opinion) under the prior distribution. The expected value of the best decision is $3(.1) + 7(.9) = 6.6$. Subtracting 4.3 results in an EVPI of 2.3. This indicates that no more than $2,300 should be spent on sampling.

Perfect information is seldom available and, for this reason, the expected value of sample information (EVSI) is a useful number to the decision maker. To compute this value, the decision maker must have or assume some knowledge about the population from which he plans to sample. In this case we will continue making assumptions that keep the presentation and computations simple.

The computation of EVSI requires the use of Bayes' Model to combine the audit decision-maker's prior probability with each possible sample outcome, compute the expected values of each possible outcome, and then identify those sample outcomes that would indicate a change from the decision indicated by the auditor's prior distribution. The EVSI for a particular sample size is the sum of the expected values of all actions for all sample outcomes indicating a change in decision weighted by the probability of that sample outcome occurring. The Appendix summarizes the computations of EVSI for a sample of five from the b_i making up our balance, B. In this sample we have assumed that only two situations could exist in the balance B. Either a material error exists, defined as exactly 20 b_i's in error by their total amount, or there is no material error which is defined as exactly 5 b_i's in error. Sampling is defined to be with replacement to permit use of binomial tables. The computed EVSI is .443. If the cost of taking each sample item is twenty dollars (.02 in terms of the payoff matrix), the expected net gain of sampling (ENGS) to the auditor is EVSI less the cost of the sample or $.443 - 5(.02) = .343$. This value should be positive for a particular sample to be worthwhile. In this case the sample is worth $343 to the auditor in terms of his payoff table.

Given acceptable means of assessing prior beliefs and payoff functions, statistical decision theory presents auditors with an interesting and potentially desirable alternative. Using the expected net gain from sampling as a criterion, the auditor could compute the value of alternative sample sizes and choose a sample size that is optimal in terms of his payoff function. The cost of sampling can be expected to increase in an approximately linear fashion while the EVSI will tend to increase rapidly and then level out. Figure 1 approximates the effect of increasing sample size on ENGS. In this figure n^* would be the optimal sample size.

After the auditor chooses his sample size, he will take the sample and evaluate it. His final decision is based on a terminal posterior probability distribution based on *actual* rather than expected sample results. If in the above example a sample of five were taken with two errors (as described above)

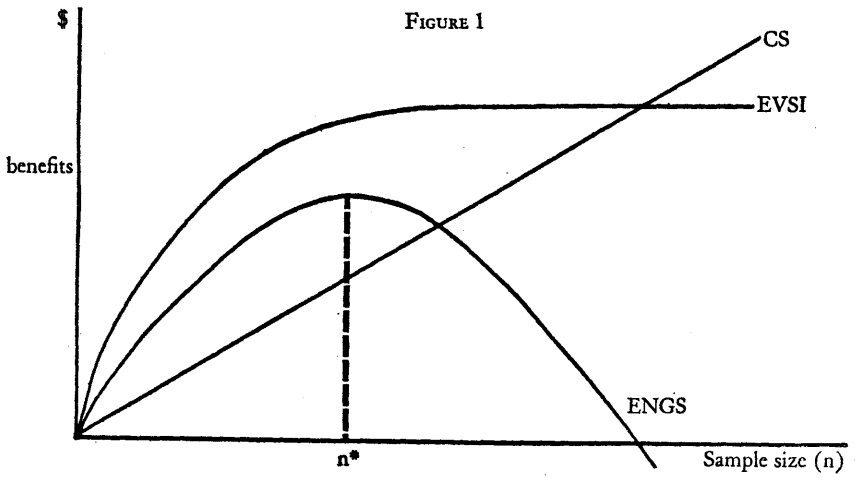

FIGURE 1

located, a specific terminal posterior distribution can be obtained. When this posterior is combined with the loss function (table), either a_1 or a_2 will have a higher payoff indicating the appropriate action for the auditor to take. In the example the posterior distribution on the states would be:

$P(S_1) = .515$

$P(S_2) = .485$

as indicated by the Appendix. The expected payoff of the two actions would be:

a_1: $-20(.515) + 7(.485) = -6.905$

a_2: $3(.515) + -1(.485) = 1.060.$

The indicated action is to require an adjustment to B.

Extensions and Research

The simplifications made in the above illustration can be relaxed to develop a model more closely fitting actual audit decisions. Without actually constructing an example, a modification particularly appropriate for audit decisions will be proposed in the following paragraphs.

In comparing the above example to the auditor's decision environment, the first point that might occur to the experienced auditor is "if only the real world were so simple!" Instead of a single decision in isolation, the auditor in examining a set of financial statements must make a series of complex, interrelated decisions as to the type and quantity of evidence to collect and evaluate. To deal with this complexity, the profession has relied on good, "intuition based" judgment developed through training and experience. A less charitable observer might add that auditors may tend to over-rely on conventional practices to deal with this complexity. For example, it has been observed that some practitioners do too much cash work. This event might be a result of relying on convention rather than good judgment.

To deal with the auditor's decision environment, the decision theorist needs a structure or sequential model of the auditor's decision or judgment processes.

Such a model has not been clearly exposed in the literature, but SAP No. 54 (now Section 320 of Statement on Auditing Standards No. 1) does implicitly seem to include the framework of such a model. One possible view of that framework is as follows:

1. The auditor engages in a process of learning the client's operations, operating environment, accounting systems, and personnel. In a decision theory context he is collecting general evidence so that he can claim to be an expert with regard to the client and begin his examination with non-diffuse or concentrated prior probability distributions on each material element in the financial statements.
2. For each significant class of transactions the firm is likely to have a separate information subsystem providing the basis for one or more balances or parts of balances in the financial statements. For each such subsystem, for the system handling miscellaneous transactions, and for the system combining the results into financial statements, the auditor evaluates the internal control. In a decision theory context the auditor is assessing his belief to this point regarding the probability distribution on each accounting subsystem generating and not correcting a material error.
3. Using the prior distribution developed in (2) above, the auditor will plan, both as to type and scope, systems (compliance) tests and output (substantive) tests. In a decision theory context he is engaging in assessing the expected net gain from sampling, ENGS, for both (1) different types of tests and (2) different sample sizes (up to and including a census). This assessment requires the use of a payoff function and is based on the expected results of sampling as the above example indicates.
4. The execution of the plan established in (3) above will in essence be a series of Bayesian revisions of the auditor's subjunctive beliefs regarding the financial statements based on the actual results of sampling. At each major step in execution the auditor should revise his remaining plans based on the results of the preceding evidence. Each posterior distribution becomes a prior probability distribution for the next evidence collection activity. Note that at the conclusion of systems testing for all accounting subsystems, the auditor must combine the results of one *or more* systems to complete his prior assessment of balances. For example, the accounts receivable balance may be the result of an accounting subsystem for credit sales being combined with a cash collection subsystem. The posterior distributions for both systems should be combined for use as a prior distribution in testing the accounts receivable balance. In addition, the interrelationship of financial statement balances would have to be considered. The results of tests of sales and cash balances could influence the posterior distribution on accounts receivable.
5. Finally, the auditor reports his opinion on the financial statements choosing from among those opinions proscribed by his profession. In a decision theory context, this would be a final decision based on the payoff function and his confidence in the balances as expressed in his terminal posterior distribution on the balances.

While representing an untested suggestion, the above process clearly indicates that a modeling of this complex series of decisions is a challenging task.

In practice the computations and analysis suggested by this process would require computer algorithms.

In addition to the usual advantages of modeling judgment processes to gain insights for improvements and further productive research, decision theory seems to promise another possibility.[9] The auditor's current environment is litigation prone and many cases suggest that trouble for the auditor may have been the result of slow response to a changing environment. An auditor may be undesirably slow to change because of the "weight" of professional conventions. A decision theory approach to an audit may encourage and help justify change in the face of this pressure from conventional practices because it provides a means of comparing alternative sources of evidence in terms of criteria that should be convincing.

Additional benefits that a decision theory approach to auditing may provide are in the area of communication. In the application of the current intuition/judgment-based approach to scope and evidence source decisions, it is often difficult to articulate clearly the criteria used in making decisions. If decision theory could make these criteria more explicit, it is likely that the on-the-job training and supervision of inexperienced assistants could be facilitated. In addition, communication between experienced auditors is less likely to be garbled if it is based on explicit agreement on risk and payoffs. Another aspect of communication relates to the evaluation of our services by society. While certainly not a panacea, a decision theory approach may facilitate the documentation of decisions and criteria that will be more convincing and less "mystic" to outsiders (such as attorneys and regulators).

Concluding Observations

In concluding an exploratory discussion of an untested source of new techniques, it is appropriate to reinforce the problem areas that must be carefully researched before an evaluation of their usefulness can be made. There are at least three significant problems. The first is identification of the structure of the process discussed above. Second, as noted above, some research on assessing prior probability distributions has been published. But before such techniques can be considered practical for auditors, considerable additional effort in developing appropriate distributions and means of training professionals in their use is needed. Third, the payoff function (table) used above needs considerable expansion and testing on auditors before any use of decision theory can be seriously considered. Basic texts in decision theory do develop the continuous payoff and probability function relationship that could be appropriate for auditors. But they need testing and evaluation in the auditor's environment. Further, the use of monetary values in an auditor's payoff function does not seem reasonable.[10] Because of the extremely large amounts that a decision-state combination resulting in a lawsuit might involve and the nonmonetary, or at least indirect, effects on reputation, a utility-based payoff function seems more reasonable.

In summary, decision theory offers considerable promise. Its basic promise that decisions under uncertainty are best made based on a probabilistic collection and evaluation of sample evidence structured in terms of economic criteria (the expected payoffs) is appealing as a model for the audit process. Whether or not

the application of decision theory to auditing will result in better audit decision-making, better communication between auditors and their public, and better communication between auditors can be answered only through research. The outlook is promising.

Footnotes

1. See, for example, Richard M. Cyert and H. Justin Davidson, *Statistical Sampling for Accounting Information,* Prentice-Hall, Inc., 1962, and *An Auditor's Approach to Statistical Sampling,* American Institute of Certified Public Accountants. (Five-volume Individual Study Program.)

2. Note that the risk discussed here is only for estimation or confidence interval purposes. Sampling risk in a hypothesis testing environment is specified by making explicit (or controlling) both the risk of rejecting an acceptable population and the risk of accepting an unacceptable population.

3. See, for example, William H. Kraft, Jr., "Statistical Sampling for Auditors: A New Look," *The Journal of Accountancy,* August 1968, and James E. Sorensen, "Bayesian Analysis in Auditing," *The Accounting Review,* January 1969.

4. Donald M. Roberts, "A Statistical Interpretation of SAP No. 54," *The Journal of Accountancy,* March 1974, pp. 47-53.

5. See John C. Corless, "Assessing Prior Distributions for Applying Bayesian Statistics in Auditing," *The Accounting Review,* July 1972, and Robert L. Winkler, "The Assessment of Prior Distributions in Bayesian Analysis," *The Journal of the American Statistical Association,* pp. 775-800.

6. See Kenneth A. Smith, "The Relationships of Internal Control Evaluation and Audit Sample Size," *The Accounting Review,* April 1972, pp. 260-269 for a discussion of this issue.

7. See, for a non-technical discussion of value in this model, Howard Raiffa, *Decision Analysis,* Addison-Wesley, 1968.

8. As is discussed briefly later in this paper, the use of monetary values in a payoff function represents an assumption. The payoffs in a payoff function should be values from a personal utility function. The use of utility gives recognition that dollars can have different worth to different people. Monetary values will be used in this example, but this aspect of payoff functions needs to be analyzed in the auditor's environment.

9. For examples of research in the use of other judgment-oriented disciplines see C. E. Gorry and G. O. Barnett, "Sequential Diagnosis by Computer," *Journal of the American Medical Association,* 1968, Vol. 205, and E. S. Epstein, "A Bayesian Approach to Decision Making in Applied Meteorology," *Journal of Applied Meteorology,* 1962, Vol. 1.

10. See Ward Edwards and Amos Treversky, *Decision Making,* Penguin Books, 1967, pp. 1-95 for a summary of the literature on the distinction between a utility-based and a monetary payoff function.

Appendix

The following tables show the computation of EVSI for a sample of 5 where the sampling distribution under S_1 is a binomial distribution with $p = .2$ and under S_2, $p = .05$.

(1) Sample results	(2) Prior	(3) Likelihood of Sample Result*	(4) Product of (2) · (3)	(5) Posterior
1. 0 error, 5 correct	error .1	.3277	.03277	.045
	correct .9	.7738	.69642	.955
			.72919	
2. 1 error, 4 correct	error .1	.4096	.04096	.183
	correct .9	.2036	.18324	.817
			.22420	
3. 2 error, 3 correct	error .1	.2048	.02048	.515
	correct .9	.0214	.01926	.485
			.03974	
4. 3 error, 2 correct	error .1	.0512	.00512	.838
	correct .9	.0011	.00099	.162
			.00611	
5. 4 error, 1 correct	error .1	.0064	.00064	1.000
	correct .9	.0000	.00000	.000
			.00064	
6. 5 error, 0 correct	error .1	.0003	.00003	1.000
	correct .9	.0000	.00000	.000
			.00003	

Sample Outcome	Action	Expected Payoff	Change in Decision?	Value of Sample Info
1	a_1	$-20(.045) + 7(.955) = 5.785$		
	a_2	$3(.045) + (-1)(.955) = -.82$	no	0
2	a_1	$-20(.183) + 7(.817) = 2.059$		
	a_2	$3(.183) + (-1)(.817) = -.268$	no	0
3	a_1	$-20(.515 + 7(.485) = -6.905$		$1.060 - (-6.905) = 7.965$
	a_2	$3(.515) + (-1)(.485) = 1.060$	yes	
4	a_1	$-20(.838) + 7(.162) = -15.626$	yes	$2.352 - (-15.626) = 17.978$
	a_2	$3(.838) + (-1)(.162) = 2.352$		
5	a_1	$-20(1) + 7(0) = -20$	yes	$3 - (-20) = 23$
	a_2	$3(1) + (-1)(0) = 3$		
6	a_1	$-20(1) + 7(0) = -20$	yes	$3 - (-20) = 23$
	a_2	$3(1) + (-1)(0) = 3$		

$EVSI = 7.965(.03974) + 17.978(.00611) + 23(.00064) + 23(.00003) = .443$

* The likelihood of the sample result is the probability of the sample result occurring given that the sample was from state S_1, where the error rate is .2 or state S_2 where the error rate is .05. The probabilities are from a binomial table.

Discussant's Response to A Decision Theory View of Auditing

James K. Loebbecke
Touche Ross & Co.

Compliments are in order for Bill Felix on a fine paper. It covers the subject well and reflects elements of both tact and wisdom. Tact is evident in that it presents a model which expresses decision criteria in terms of a *payoff* matrix instead of a *loss* function. This is a distinction which, I can assure you, is particularly appealing to practicing independent public accountants. Wisdom is reflected in that it discusses several of the broader aspects of using a decision model in auditing as well as the technical characteristics of the model itself.

Within the past two years I have become increasingly involved in the challenging problem of "modeling the audit." It would seem so nice to have the complete audit model—the ultimate audit tool. My research has disclosed models which are variously described as probabilistic, stochastic, analytical and simulation models.*

My intent today is not to debate the technical details of Bill Felix' model or any of these others. Rather, I would like to consider some questions about audit models in general: are they feasible, are they desirable, and how should they be implemented?

Feasibility

Audit models are clearly feasible. This statement lies partially in the definition of audit models. Consistent with Bill's paper (which presents *a* model, not *the* model) the classical statistical inference model now common in auditing is an audit model. Other models are more complex, but none of their authors show an absence of conviction about their ultimate feasibility. Further indication of feasibility is suggested by successful applications of models in other fields. Examples of such models can be found in engineering, medicine and other sciences. Problems of computation and volumes of data previously deemed overwhelming have been successfully solved with computer assistance. This tool is causing a significant change in auditing and is the key to further advanced techniques.

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* See the following examples:
William R. Kinney, Jr., "A Decision Theory Approach to the Sampling Problem in Auditing," University of Iowa Working Paper Series No. 74-4, March, 1974.
John Neter and Seongjae Yu, "A Stochastic Model of the Internal Control System," University of Illinois at Urbana-Champaign Faculty Working Paper No. 106, April 1973.
Barry E. Cushing, "A Mathematical Approach to the Analysis and Design of Internal Control Systems," *The Accounting Review,* January 1974, pp. 24-41.
James K. Loebbecke and David Burns, "Computer Simulation of Internal Control Systems," unpublished paper.

Desirability

Accepting their feasibility, we must ask whether audit models, in the broadest sense, are desirable. The answer to this question is *yes*. Bill's paper presents several advantages to be derived from using risk or decision models in auditing:

- Control of risk through precise definition
- Expression of decision criteria in more meaningful terms
- A vehicle to motivate better response to changes in the audit environment
- A framework for improved communication both between auditors and with those affected by auditor results

I agree with these and would express their sum as a means through which the auditor can achieve *objectivity;* a factor that is of ultimate importance to all concerned with the audit process.

Generally, in auditing, the first examination for a new client is the most objective one. More time is spent on learning activities, more attention is given to the objectives of corroboratory activities, and there is a greater sense of awareness and skepticism. In subsequent examinations, however, even the best auditor is biased by the preconceptions formed by preceding efforts and findings. If we are to provide a high level of audit service on a continuing basis, we must use techniques to preserve objectivity.

However, there are some dangerous elements to consider here as well. First, since the decision model is a tool, it is liable to evoke the Law of Instruments. That is, its users may become so enamored with its internal characteristics that they either apply it in situations where it is not appropriate, or they fail to use it properly in situations which differ slightly from the norm.

Second, a characteristic of decision models is that they are designed to facilitate a decision, one way or the other, according to the best payoff *without* considering the quality, and thereby the adequacy, of the underlying audit evidence. I view auditing decision making as a two-stage process. The low order stage involves the decision of accepting or rejecting the particular proposition at hand using the evidence gathered; but this can be reached only after the high order decision is made that the evidence is adequate for that purpose.

The sum of these pitfalls is serious, but they can be overcome by proper model design, by user understanding of the concepts underlying the techniques used, and by intelligent application. We must realize that one of the major differences between advanced audit techniques and traditional techniques is a shift in quality control emphasis (and effectiveness) from the reviewer to the performer. Also, most advanced techniques deal with inference and not certitude. For these reasons, a "cookbook" approach must not be taken.

The final element of desirability is cost. Audit models will clearly require an investment in research, development of tools, and training. However, there will be resultant savings in terms of increased efficiency and reduced costs of bad decisions. I believe the tradeoff will be favorable.

Implementation

Designing a model is one thing; implementing it in practice is another.

Implementation of advanced auditing techniques involves two groups: users and audit management. The users, who are generally staff auditors, must be given conceptual and practical training and tools to facilitate application mechanics. Firm management must be convinced that use of the techniques will improve audit quality without unduly increasing audit cost. Neither group can be approached with the same "language," nor can they be approached with the language used in developing the technique.

The language of higher level mathematics is used in model development. When model concepts are taught, a sorting out process must occur so that overly complex aspects are presented in terms of ideas rather than mathematical terms, and so that any mathematical terms used are within the user's comfort level. Application tools, of course, must utilize the proper techniques, but in a transparent manner, such as can be provided with computer programs.

It is likely that model users will be quite receptive. Advanced audit techniques make auditing more enjoyable, and, fairly fresh from school, most users are preconditioned to use them. Firm management may not be so receptive, and if approached through use of even a minimal amount of mathematical jargon, may reject the idea completely.

The proper approach, in my opinion, is to show audit management that the advanced audit model or technique is simply a refinement of one or more elements of the intuitive model he has been using all along. Bill Felix' paper is completely consistent with this view, as is expressed in his presentation of an intuitive model extracted from SAP 54. I performed this same exercise at the time the SAP was published as a means of determining how it should be interpreted. The result was a model entitled "An Outline of the Basic Audit Process" which contains twelve basic steps and involves five basic decision processes (see Appendix).

Audit management knows both the importance and the difficulties involved in making these basic decisions properly. Audit managers realize that their behavior is affected by these difficulties in the very direct sense that they "over-audit" to compensate for the risks that they cannot otherwise deal with. If audit managers can be presented with techniques that clarify this process they will accept them. But clarification means clear to *them,* not just clear to the proposer.

Appendix

An Outline of the Basic Audit Process

Step 1 Determine the nature of the client's business and industry. Primary resources are:

- A. Firm's industry expertise
- B. Historical data
- C. Overall organization and procedures
- D. Current financial data

Step 2 Obtain description of system of internal control.

Step 3 Make DECISION I: *Is the entity auditable?*

The two parts to this decision are:

A. Does there appear to be an adequate system to produce evidence to be examined?

B. Does management appear to be honest and willing to present the necessary evidence?

If answer is YES—proceed to Step 4.

If answer to Question A is NO—advise that a disclaimer will be rendered.

If answer to Question B is NO—withdraw from engagement.

Step 4 Design preliminary plan of substantive audit procedures for auditing financial statements based on:

A. Nature of industry and company as reflected in description of system.

B. Practical circumstances relating to timing and scope.

Step 5 Make DECISION II: *Does the preliminary plan of substantive audit procedures indicate that the auditor is relying on internal control to produce accurate year-end financial data?*

(Examples of circumstances when reliance is implied:

- Substantive tests, e.g., confirmation of receivables, inventory observations, etc., are performed prior to year-end.
- Detailed documentation is examined on a test basis.
- Inventory observations are not performed at all locations.
- Only certain units are visited in a multi-unit company.
- There is an emphasis on tests of an analytical nature.)

If the answer is YES—proceed to Step 6.

If the answer is NO—proceed to Step 9.

Step 6 Identify the specific controls being relied upon and the degree of compliance assumed by the audit plan.

Step 7 Perform compliance tests of controls to be relied upon.

Step 8 Make DECISION III: *Is the actual degree of compliance comparable to assumed degree?*

If answer is YES—proceed to Step 9.

If answer is NO—update description of system of internal control, revise preliminary plan of substantive procedures, *and then* proceed to Step 9.

Step 9 Perform planned or revised substantive auditing procedures.

Step 10 Make DECISION IV: *Do results of substantive procedures corroborate the auditor's understanding of the system of internal control?*

If answer is YES—proceed to Step 11.

If answer is NO—update description of system, further revise substantive procedures and perform them, *and then* proceed to Step 11.

Step 11 Make DECISION V: *Does the evidence gathered by our procedures constitute adequate competent evidential matter in support of an opinion?*

If answer is YES—proceed to Step 12.

If answer is NO—design and perform additional necessary procedures, *and then* proceed to Step 12.

Step 12 Issue report containing opinion arrived at in Step 11.

6

Setting Standards for Statistical Sampling in Auditing

John C. Broderick

Arthur Young & Co.

Auditors welcome the existence of the ten generally accepted auditing standards (GAAS) and the Statements on Auditing Standards. These auditing standards and authoritative interpretations ensure order in the tasks they perform. Among other things, GAAS require that examinations of financial statements be performed with due professional care by persons having adequate technical training, proficiency, and independence of mental attitude; that examinations be properly planned and supervised; that examinations include a study and evaluation of internal accounting controls; and that sufficient competent evidential matter be obtained to provide a reasonable basis for an opinion on the financial statements. Thus, GAAS provide an auditor with the framework for selecting and applying auditing procedures.

Importance of Judgment

The selection of specific procedures is largely a matter of judgment. In any particular audit engagement, judgment will be influenced by a number of matters; matters such as the nature and the problems of the business whose financial statements are being examined, the quality and effectiveness of the business' accounting procedures and internal accounting controls, and the materiality of the various items being considered. An auditor must also exercise judgment in determining the extent of auditing procedures, in choosing a method for selecting items to be examined, and in evaluating the audit significance of matters that come to his attention during the examination. Exercise of judgment is at the heart of auditing.

Statistical Techniques as an Aid to Judgment

In the early 1960s, auditors began to explore the potential advantages of using statistical sampling techniques to aid them in making audit judgments: in determining the extent of their audit tests, in selecting their test items, and in quantifying their test results. Since those early explorations, statistical sampling as an audit technique has received increasing attention, as evidenced by Statement on Auditing Procedure No. 54, which contained two lengthy appendices devoted to the use of statistical sampling in auditing. These appendices now appear in Sections 320A and 320B of Statement on Auditing Standards No. 1. Witness also the number of articles on the subject in *The Journal of Accountancy*, *The Accounting Review*, and *The Internal Auditor*.

Most auditors agree that statistical sampling can be an effective audit tool. Many, however, feel uncomfortable in making the decisions essential in applying it. Thus, it is only natural that they look to others for help. They seek advice as to which sampling methods are most appropriate for various types of audit tests. For example, they ask whether they should use the same statistical method for tests of compliance with internal controls as they would use for tests of financial statement items. They seek advice in choosing statistical criteria for their tests: they want to know what confidence levels they should use and what sampling precision their tests should produce. Auditors first looked to mathematicians and statisticians for help. Who else they reasoned would be more qualified to give advice on the application of statistical sampling? Often, auditors were disappointed with the advice they received. Part of the disappointment resulted from a lack of in-depth understanding of audit objectives by the mathematicians and statisticians; part resulted from a lack of understanding of the meaning of sampling results by the auditors. I suspect, however, that a more significant part of the disappointment resulted from what the auditors believed to be overly conservative recommendations by the statistical experts. Auditors who followed the criteria suggested by the experts often found that the sample sizes needed to meet such criteria were larger than they expected them to be. Many auditors believed that the use of statistical sampling in auditing would produce dramatic reductions in the number of items they would have to examine.

As a result of their disappointment with the advice from the statistical experts, some auditors began to establish their own sampling criteria. All too often, the bases for these criteria were intuitive ones. As a result, undue weight was given to sample size considerations (the "magic numbers") and insufficient weight was given to test objectives.

A Search for Standards

Many auditors have naturally turned to the accounting profession in the hope that the profession would establish standards. The demands upon the profession have, in my opinion, been too narrowly directed. I see, for example, little demand for guidance material designed to provide the auditor with a good understanding of the role of statistical sampling in auditing. Rather, I sense a desire for standards which may be a substitute for judgment in the decision making process. Auditors are asking the profession to specify numerical criteria as to what is an acceptable sampling precision and what is an acceptable confidence level for audit tests. To the extent that these persons want standards that specify a single precision value and a single confidence level appropriate for all tests, I am troubled. I don't believe such standards can or should be established. The arbitrary choice of the same sampling precision and the same confidence level for all tests is inappropriate. In some cases the choice will be too conservative, causing wasted audit effort; in other cases the choice will not be conservative enough, creating unwanted and unnecessary risk. If, on the other hand, standards developed by the profession further auditors' understanding of applicable statistical techniques and, as our generally accepted auditing standards do, provide a framework within which auditors can apply their judgment, I will welcome them.

Precision and Confidence Level

I have referred several times to the expressions sampling precision and confidence level, and because they often imply different things to different people, let me describe to you my understanding of their meaning.

When I use statistical sampling for an audit test, my purpose is to obtain a reasonable estimate of the true condition of a group of items. This may, for example, be in terms of the rate of compliance with a particular element of internal control, or it may be in terms of the value of an account balance. By examining a sample of items selected from the group, I expect to be able to reach a reliable audit conclusion about the condition of all the items in the group.

Whenever I examine only some of the items in a group, there are two consequences:

1. I cannot determine the exact condition of all of the items; I can only estimate the condition.
2. I cannot be sure that my estimate is 100 percent reliable.

I can, however, determine the probability that my estimate is within any specified range of the true rate or value. For example, I may be able to conclude that there is a 95 percent chance that the actual percentage rate of compliance with an element of internal control is within a range of two percentage points on either side of the rate of compliance contained in my sample. That is, the true rate may be higher or lower than the sample rate but there is a 95 percent chance that it is within the specified range. To the 95 percent chance referred to above I will give the name "confidence level"; to the range within which I believe the true rate lies, the name "confidence interval"; to one-half of that range, the name "sampling precision." If there is a 95 percent chance that the specified range contains the true rate there is also a five percent chance that the true rate is outside the range. To this five percent chance I will give the name "statistical risk."

The notions of confidence level and sampling precision are inseparable. One can never express the confidence level for an estimate without specifying the related sampling precision. Thus, because they are inseparable, any guidelines for choosing confidence levels must necessarily include guidelines for sampling precision. Recognizing this, let me illustrate how guidelines might be developed.

Developing Guidelines

Because an auditor's choice of a confidence level and sampling precision will influence the size of the sample he must examine, he must be sensitive to the increased cost of auditing when high confidence levels or narrow sampling precision are used. But a drive for efficiency becomes a fault if it interferes with the application of due professional care and inhibits the auditor in his undertaking to obtain adequate competent evidential matter. The fact is that different statistical techniques and different audit situations call for different sample sizes. Sample sizes must be sufficiently large to produce meaningful results in terms of test objectives. An auditor who uses smaller samples than circumstances require may as a consequence fail to detect material errors. On the other hand,

he may conclude that error rates are greater than in fact they are, or that account balances are misstated when in fact they are fairly stated. The confidence level guidelines shown in the table below when applied with sampling precision guidelines described later should enable the auditor to effectively determine the sample size he needs to accomplish his test objective.

	Preliminary Evaluation of Internal Controls		
	Excellent	Fair	Weak or Nonexistent
Range of confidence levels for tests of compliance with internal controls	95% to 99%	90% to 95%	None required
Range of confidence levels for tests of account balances if preliminary evaluation of internal controls is confirmed by compliance tests	90% (or less if appropriate*)	95% to 99%	97.5% to 99%

* In certain situations, where the results of all related audit procedures indicate that a high degree of reliance may be placed on internal control, it may be appropriate to use a confidence level as low as 80% for tests of account balances.

The guidelines in the table recognize that the choice of confidence level for an audit test should be related to the degree of reliance the auditor intends to place on elements of a client's system of internal control and to the importance of the test with regard to the fairness of the financial statements.

Some auditors believe that when their preliminary evaluations indicate that the applicable elements of internal control are excellent, their tests of compliance with those elements need not be extensive. Consequently, they choose lower confidence levels for the tests. Only when the elements of control appear to be weak do they choose high confidence levels.

The guidelines presented in the table above reflect a different philosophy. They assume that if an auditor's preliminary evaluation indicates that internal control elements are excellent he will intend to place a high degree of reliance on them. Thus, he will want to have a high degree of assurance that the elements to be relied upon have in fact functioned effectively. To attain a high degree of assurance, he must perform relatively extensive tests of compliance. If the preliminary evaluation indicates that the applicable internal control elements are only fair, an auditor will nevertheless tend to place some degree of reliance on them. If he decides to do so, he will perform tests of compliance in order to satisfy himself that the intended degree of reliance is justified. Since the extent of reliance is to be lower, the tests may be less extensive. When the preliminary evaluation indicates that the applicable internal control elements are weak or nonexistent, an auditor will be unable to rely on internal controls. Consequently, he need not perform tests of compliance. In this situation he will concentrate audit effort on tests of account balances and other types of procedure.

The required extent of tests of account balances will usually vary inversely with the degree of reliance the auditor places on internal controls. If an auditor has concluded that internal controls are strong and have functioned effectively,

he will expect that there will be fewer (and often smaller) errors in the accounts. Thus, he may decide that he can appropriately reduce the extent of his tests of account balances. Conversely, if internal controls are weak, or if the auditor wishes for other reasons to concentrate audit effort on tests of account balances, these tests should ordinarily be more extensive than they would be if he were relying more on internal controls.

Setting Confidence Levels

The confidence levels I have illustrated are relatively high, compared with those recommended by some other auditors. Some consider it appropriate to use confidence levels as low as 50 or 60 percent for tests of account balances. They justify this by combining two types of risk. They assert that most systems of internal accounting control provide some degree of protection against the occurrence of material accounting errors. If their evaluation indicates that the elements of internal control are excellent, they believe the chance that a material accounting error will have occurred is in itself probably very low. They further believe that, based on their evaluation of the elements of internal control, they can assign a numerical reliability level to "internal accounting control and other relevant factors." In other words, they feel that they can quantify the risk that a material accounting error will have occurred. They then maintain that they can combine this subjectively determined risk with the "statistical risk" used for their tests of account balances to determine their overall audit risk. Quantifying the discussion, an auditor may intuitively believe that the risk that a material error has occurred is, say, five percent. In view of this, he should be willing to accept a risk of, say, 40 percent that his tests of accounts balances will be reliable, and therefore he should use a 60 percent confidence level. He should be willing to use the lower confidence level because the combined risk that a material accounting error will have occurred and that the error will not be detected by the test is the product of the two risks—i.e., five percent times 40 percent or two percent.

This process may be mathematically correct and the concept of joint risk may indeed be a factor to consider. The sticking point is that the first risk included in this equation (that a material accounting error will have occurred at all) is a subjectively determined one. This may be a correct determination but the auditor cannot be sure it is a correct one. In fact, in any particular situation, a material accounting error either has occurred or has not occurred (the actual risk is either zero or 100 percent). The average or overall risk is not the controlling factor. If a material accounting error has in fact occurred, the risk of failing to detect it is the specific risk assumed for the specific test designed to detect the specific type of error.

Now I do not intend to downplay the importance of controls. Auditors should recognize that the better the accounting controls, the smaller the chance that material errors will occur. Certainly this should have a bearing on their choice of confidence levels and of auditing procedures. Indeed, the condition of controls plays a significant part in my illustration of guidelines for confidence levels. I believe, however, it is imprudent to rely on a subjectively determined numerical evaluation of the effectiveness of internal control to justify assuming an unduly high risk in audit tests, especially tests of material account balances.

Relationships of Confidence Levels and Precision

Earlier, I stated that the notions of confidence levels and sampling precision are inseparable and that guidelines for choosing confidence levels must necessarily include guidelines for sampling precision. To illustrate the relationship between confidence levels and sampling precision, assume that the results of his sampling permit an auditor to be 95% confident that the true value of an account balance is within a range of $50,000 on either side of the value estimated from his sample. If the auditor does not feel the 95 percent confidence level is high enough, he can easily reevaluate his sampling results at a higher confidence level, say 99 percent. If he does this however, he must be willing to accept a sampling precision of more than $50,000. Increasing the confidence level for an estimate will always widen the sampling precision of the estimate unless additional items are selected and examined.

Statistical risk depends upon both the confidence level and sampling precision of the estimate. The risk an auditor assumes when he uses statistical sampling for a test of financial statement items may be described as:

1. The risk of concluding that a fairly stated financial statement item is misstated and
2. The risk of concluding that a misstated financial statement item is fairly stated.

An auditor can control magnitude of these risks by his choice of confidence level and sampling precision. To illustrate this, assume an auditor is using what is called estimation sampling; he is attempting to estimate the true value of a financial statement item. In evaluating his sampling results, he will generally consider the financial statement item being tested to be fairly stated if the book value of the item lies within the confidence interval of his estimate. If the book value lies outside the confidence interval he will have reason to believe that the book value is misstated. If the financial statement item being tested is in fact correct, what is the chance that its book value will lie within the confidence interval of the auditor's estimate; what is the chance that it will be outside the confidence interval? The chance is determined by the confidence level. If an auditor uses a 90 percent confidence level for his test, there is a 90 percent chance that a correct value will lie within the confidence interval and a ten percent chance that it will lie outside the confidence interval. Thus, when the estimate is made with a 90 percent confidence level there is a ten percent chance that the auditor will conclude that the correct value is misstated. The consequence of this conclusion will generally be that the auditor will expend additional and unnecessary audit effort to satisfy himself that the financial statement item is in fact fairly stated. The consequences could be more significant if he were to propose an adjustment to the balance when in fact no adjustment is appropriate.

Risk of Accepting a Misstated Amount

The risk of concluding that a misstated financial statement item is fairly stated is controlled by the auditor's choice of sampling precision. Sampling precision was defined earlier as an amount equal to one-half the confidence interval. If the sampling precision of an estimate is extremely wide, not only

will a correct value lie within the confidence interval, but a misstated value may also lie within the interval. If the misstatement is slight the auditor might not be concerned. However, if the misstatement is large, as, say, the smallest amount considered to be material to the financial statements (which I shall refer to as a material amount) the auditor must be concerned. His sampling plan must be designed so as to limit the risk of accepting a financial statement item that is misstated by a material amount.

Even though a conservative (high) confidence level is chosen for a test, the risk of accepting a material misstatement in a financial statement item will be high if the sampling precision achieved is wide. Some auditor's choose to make their estimates with sampling precision equal to a material amount. If they do this, there is a 50 percent chance that a book value which is misstated by exactly a material amount will lie within the confidence interval of their estimate and thus be accepted. This would occur regardless of the confidence level used to make the estimate. If, on the other hand, the sampling precision achieved is equal to one-half a material amount, the risk that the book value will lie within the confidence interval of the estimate is only one-half the statistical risk, i.e., one-half the difference between the confidence level used and 100 percent.

Thus, if the sampling precision of an estimate is equal to one-half a material amount at a 90 percent confidence level, the risk of failing to detect a material misstatement in the account would be five percent. Of course, if the misstatement were by more than a material amount, the risk would lessen.

Low Confidence Levels

In an earlier illustration I stated that I did not agree with auditors who would use a 50 or 60 percent confidence level for their testing of financial statement items. If the sampling precision of their estimates at these low confidence levels were extremely narrow however, say, one-third to one-quarter of a material amount, I would be less inclined to disagree with their choice of confidence levels. Sampling results with as narrow a sampling precision as that would provide an auditor with good protection against failing to detect a material misstatement. However, I must still recognize that the choice of a low confidence level means that I increase my chance of rejecting the fairly stated balance even though my sampling precision is small.

Concluding Observations

The only practical way for an auditor to adequately ensure against the two risks described above is to use adequate sample sizes. Any attempt to minimize unduly the size of the sample will result in undue exposure to one or both risks. To illustrate, small samples generally produce estimates having one of the following sets of characteristics:

a. A high confidence level and wide sampling precision.
b. A low confidence level and narrow sampling precision.
c. A low confidence level and wide sampling precision.

A comparison of the relative risks with each of these sampling results may be shown as follows:

Sampling result	Risk of accepting a material misstatement	Risk of rejecting a fairly stated balance
a. High confidence level and wide precision	high	low
b. Low confidence level and narrow precision	low	high
c. Low confidence level and wide precision	high	high

Thus, auditors should attempt to design their sampling plans to yield relatively narrow precision at relatively high confidence levels. An earlier table illustrated guidelines for confidence levels, and my discussion above demonstrates that a desirable guideline for sampling precision is that it be no greater than one-half a material amount.

In my view, current applications of statistical sampling techniques in accounting and auditing are limited compared with what we can expect in the future. However, new techniques must be developed; our practice will demand them. For example, the sophistication of computerized accounting systems will place great demands upon our ability to capture and audit data. A statistical sampling capability will be an important key to our success in auditing such systems effectively and efficiently. We must strive to build that statistical sampling capability on a strong foundation. The building blocks of the foundation will be the long-standing, mathematically sound sampling techniques; the mortar that binds the blocks must be an understanding of the techniques. Intuitive applications of statistical sampling techniques are dangerous; they can only weaken the foundation and in the long run cause it to fall in ruin.

Discussant's Response to Setting Standards for Statistical Sampling in Auditing

Lawrence L. Vance

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John Broderick has raised interesting and important questions about the application of statistical sampling in auditing. The two areas of most concern that he has discussed and which I wish to comment upon are (1) the role and method of evaluation of internal control and (2) the matter of setting standards in general, with particular reference to the precision band in estimates.

Evaluation of Internal Control

Our use of internal control evaluations may be approached in at least two ways, which I refer to as the three-step and two-step methods. In the three-step method, which appears to be Mr. Broderick's preference, one first evaluates internal control on the basis of descriptive material—organization charts, procedure manuals, and conversations with members of the organization who are operating the system. On this basis, one forms a judgment about the apparent quality or effectiveness of the system. The second step in the three-step method is to test the operation of the system with documents and other records that disclose directly the working of the system. We are all aware that the system prescribed on paper and reported as functioning by members of the organization may in fact be distinctly different from the one that the people involved are actually using, and the effectiveness of the system may vary accordingly. The third step is to use the results of the first two steps in determining the "extent of the testing" (to use the traditional phrase) or to set confidence and precision limits for the sampling designed to appraise the bona fides of the accounts. If either the first or second step shows weaknesses in internal control, the confidence level is raised and the precision limits narrowed for the tests of bona fides; if both indicate effective control, these levels can be reduced. Note that this three-fold concept, if applied under a policy of keeping each step distinct, requires separate samples for step two as against step three.

In the two-step approach to the evaluation and use of internal control information, step one is the same as in the three-step procedure. However, the second step proceeds directly to tests of bona fides, and the extent of these tests, or the statistical criteria they are required to meet, are determined by the subjective evaluation made in step one.

The question that arises when we have to choose between these two concepts is this: is it necessary to have an *objective*—not subjective—estimate of the functioning of internal control before we set standards for the test of bona fides?

In making a clear-cut distinction between the three-step and two-step

procedures and in making a similar distinction between arriving at a conclusion about internal control in contrast with testing bona fides, I have been ignoring what evidently is the popular practice. This consists of a blending of steps two and three of the three-step method. A judgment is made about the effectiveness of internal control in step one, but it is tentative—it is modified as documents and other records are examined if this examination shows that the system is working less well than the preliminary judgment indicated. It seems to me that this is a reasonable way to proceed, as it eliminates the implied need for separate tests of documents for internal control evaluation.

Testing Statement Amounts

We must remember in this connection that we are presumably working with some kind of estimation procedure. It is possible to use acceptance sampling techniques to decide that internal control is or is not satisfactory, or the records have been kept with sufficient absence of errors so that we are willing to conclude that the records are sufficiently accurate. However, most auditors evidently prefer to think in terms of amount of dollar error when examining financial statement figures. This requires estimation procedures, and gives rise to the combination of confidence level and precision range that Broderick has discussed. Even if we restrict our attention to errors without regard to their magnitude, most auditors may prefer to estimate the percent of error rather than to set a firm accept-reject criterion. This means that there is no restriction to a single sample size or a final sample size when examining records for a combined check on both internal control and bona fides using estimation sampling. The advantage of setting a sample size in advance on the basis of whatever method of evaluation of internal control is selected is that the available information can be used to indicate what a likely minimum size is; in other words, economy can be maximized. But once we have information directly from the subject population itself we can, in estimation sampling, calculate the indicated result, and, if this leaves us with too wide a range of precision or too low a confidence level, we can then simply increase the sample size to the point where we have the desired assurance. Because of this possibility, I doubt the need to make a clean separation of tests of internal control and tests of the so-called bona fides.

Standards for Precision and Confidence

The second major thrust of Jack Broderick's remarks concerns the setting of standards for precision and confidence, and he has mentioned both the seeming desire for specific standards which some would evidently have the profession as a whole establish, and also the problem faced by each auditor in setting standards for his own work. We are in agreement on the proposition that specific numerical standards should not be set. There are infinite gradations in the quality of internal control and of materiality relative to dollar totals, and it does not seem practical to fix minimums, which are always likely to become maximums. I agree that general standards, expressed as objectives to be achieved as they are in the standards now established by the profession, are the better kind of regulation. The auditor has to tailor his confidence and precision to the complex facts of each case, and to suggest otherwise would likely do more harm than good.

This leaves the matter of confidence and precision levels to be determined specifically by each auditor, and we must ask: what general guidelines are available? We, of course, have the fact that professional statisticians most often use 95% or 99% or approximations of them for confidence levels. Another way of looking at the problem is to ask what percent of the time one is willing to be wrong in order to economize on sample size. And this leads immediately to another question: what are the consequences of being wrong? If the error is in accepting improper statements, either no one may ever know the difference or it may be discovered and there may be a lawsuit for $1,000,000, or some equally impressive figure.

A practical approach to this decision was formulated for accountants several years ago and involves, as it must, the assigning of subjective probabilities, or expectations.[1] It is also being discussed by Professor Felix in this symposium. I recommend this approach to all auditors. If you are wrong in believing an acceptable set of figures to be materially in error, you, of course, incur the cost of the additional investigation necessary to establish the fact of acceptability. This cost must be built into the calculation just referred to as is the cost of making the opposite mistake.

Since confidence level and the precision range within which sampling results can be expected to fall are tied together, higher confidence for a particular sample means a wider precision and vice versa. To improve one while holding the other constant requires an increase in sample size. The objective is to arrive at a combination that meets our standards with as small a sample as the circumstances permit. How then should we set precision limits? Mr. Broderick has chosen to define precision in terms of half the range or "confidence interval"; standard statistical practice defines it as the whole range, recognizing that this range runs both plus and minus from our estimate of the mean of the population given by our sample. Half the range is, of course, the maximum amount we expect to be off in our estimate in one direction or the other. Mr. Broderick has indicated that some accountants are inclined to set the precision for their estimates at plus or minus a material amount.

I agree with Mr. Broderick that this is too high. My understanding of "material" in accounting usage is that it represents an amount that significantly changes the interpretation of the figure to which it applies. A precision range or confidence interval that runs in either direction from the estimate to the extent of a material amount leaves plenty of room for a book value that deviates from the proper value by a material amount. Presumably we should set confidence intervals at plus or minus a maximum tolerable error; i.e., by an amount that clearly leaves the interpretation of the published figure unaffected. This has to be an amount significantly different from a material amount; one can not set these amounts side by side. For example, if we have an inventory stated in the accounts as costing $1,000,000, and if we consider $100,000 material, we might well use plus-or-minus $25,000 as our confidence interval. If our confidence interval was plus-or-minus $100,000, and if our estimate was precisely the true amount of the inventory cost—say $900,000—then obviously the confidence interval would tend to support the overstated book value and very likely do us no good. In other words, I share Mr. Broderick's concern for the tendency to set wide precision limits and high sampling risks as a means of justifying very small samples.

Concluding Remarks

In conclusion, I would like to endorse one more of Broderick's concerns, namely, that auditors need to familiarize themselves with standard statistical theory in order to apply statistical sampling methods effectively. The AICPA has encouraged this with its publication of self-study materials on statistical sampling, but hopefully a thorough grounding will be obtained routinely by students majoring in accounting in college, and its achievement should be the responsibility of the educators in charge of college accounting programs.

Footnotes

1. Harold Bierman, Jr., "Probability, Statistical Decision Theory, and Accounting," *The Accounting Review,* July 1962, pp. 400-405.

7

The Sample of One: Indispensable or Indefensible?

Gregory M. Boni[1]

Touche Ross & Co.

Discussions and controversies among auditors about sample size have long been active. I personally experienced them since, at least, when detailed audits were becoming universally recognized as unable to serve society's needs for information about ever-enlarging enterprises. Today, however, a new relevance and urgency arises about the question of sample size. Uncensored answers to the question may present a challenge to the entire philosophical underpinning of auditing practice.

The new relevance arises because of two—not entirely unrelated—developments. The first is the articulation of Systems Theory. The second is the growing loudness of the cry by Society that the justification for technology has not been based upon humanistic values. Demands are growing that creators and users of technology be responsible for whether it contributes to or detracts from human welfare. Increasing attacks come from Society against values which give virtue to technology with assertions that objectivity or freedom overrides responsibility for human impact.

Challenge to Auditors

What is the relevance to auditors of this advancing environment? If the profession believes this is an environment in which it can survive by circumscribing itself so that the quality of its work will be judged only by its peers then it can continue on its present course. The peers can continue to argue about 95% confidence limits, or 50% limits. They can argue about how to combine compliance testing with substantive testing. Once they agree with each other about all these standards or procedures, all will be solved. Certainty will be achieved on how one's work will be judged. The upper hierarchy of knowledge will be in the saddle.

However, Society's enlarging position makes me believe that users of financial information will continue to shout—ever louder: "Hey! You guys aren't talking about anything that affects me! You argue about standards and practices of auditing in areas that by careful definition exclude what I want to know. Are the financial statements a *fair presentation*[2] of the information I need for *my decisions*? I don't feel any better if unfair presentation comes from management fraud, collusion, or because generally accepted accounting principles bring about that kind of result."

My view of auditing encounters threatening forces calling now for resolution of the mutually exclusive questions of how is "good" auditing to be judged:

By evaluation by one's peers as to compliance with standards?

By pragmatism and utility in the eyes of the users of financial information?

Why a Sample of One?

For me, the use of samples of one[3] spearheads a philosophy of auditing practice that opposes the prevailing audit-practice philosophy. The prevailing philosophy leads to a methodology that predominantly looks to justify its soundness by the use of sample sizes that comply with standards or rules derived externally from a specific audit. The sample of one is a tool for *discovery*—for the exercise of creativity by an individual. The externally derived sample size is a tool for *inspection*—for bringing about conformity, for controlling the work of others.

The thesis of this paper is that auditing approached with a methodology logical for inspection is not utilizing the methodology logical for meeting Society's demands for pragmatism and utility. Use of tools that bring about conformity and control of the work of employees is inconsistent with "good" auditing. Auditing involves evaluation of and judgment about interactive systems, not of mechanistic systems. Therefore, if the quality of the results is to be judged by pragmatism and utility in the eyes of the user, I perceive that auditing must use tools suitable for discovery and creativity. The stakes may well be the future role of the profession in Society.

The thoughts presented in this paper are directed to the level of institutionalized concepts that directly affect and strongly influence what auditors *actually do*. The vast auditing literature, like the Bible, undoubtedly contains all the imperatives necessary for doing a satisfactory audit. But these imperatives do not have the force of the institutional environment for influencing an auditor's behavior. Effectiveness of auditing cannot be judged by only looking at its prescriptions; auditing must be judged by what human beings do. "Use judgment," "Be creative," "Ask good questions," "Obtain adequate substantiating evidence," are imperatives which, if they are to be incorporated in behavior, must be institutionalized in a process which is not overridden and contradicted by specific and immediate directions and feedback. This paper is directed to this level of institutionalization.

The Mechanistic Approach

The implied (if not explicit) philosophy of auditing practice, particularly as expressed by Statement on Auditing Procedure No. 54, is that auditing is an inspection process of "stupid" objects. Statistical quality control is the most advanced use of science for performing the inspection process. The principles were developed in contemplation of outputs (work done) which do not have a purpose of their own and which do not interact with each other. That is, the outputs are independent of each other and cannot adapt themselves to a purpose. The characteristics of the first unit produced do not act as a force to change

what unit five or any other unit will look like. Unit five cannot change itself because of the way unit one looks. All this contemplates behavior of objects which are "stupid."

The inspection process of physical (stupid) objects has characteristics which are distinctly different from those possible in auditing. The inspector looks for dimensions or qualities which specifically and unequivocably are intended to *determine the utility* of the product. Its length, weight, color, smoothness, response become direct means for determining good or bad product. The nature of "errors" need not be *discovered,* only their existence or non-existence—based upon the inspection standards—needs to be *observed.*

Under these conditions, laws of probability logically and usefully apply to ascertain the existence of "errors" in the universe. Confidence limits relative to precision are thoroughly sensible.

The Living System

Auditing, in common with other studies or activities related to organizational behavior, up to now has been heavily influenced by the methodologies so successfully used in physical sciences and its related technologies. But there is growing recognition among management scientists and other social scientists that continuation of a posture suitable for the physical sciences may bring about extinction of their disciplines.[4]

Accounting information is a representation of a living system, not of a mechanistic one. The accounting process is itself a living system. Accordingly, the audit process encounters characteristics significantly different from those encountered in the physical inspection process. In auditing, the objects of study are not "stupid." Differentiated characteristics of the audit process held in common with living systems are:

1) Signals (observable characteristics) emanating from the output (work done) during stages of processing a transaction are equivocal. The signals do not uncontradictably identify "good" or "bad" characteristics that affect the utility of information to a user.
2) The signals emanating at the processing stages do not provide information that can be demonstrated to be useful for establishing empirically the expectation for errors in the aggregated end results of the processing.
3) The utility to a user of the aggregated end-results of information processing is affected by material errors or deviant behavior that exist in highly complex functional modules. These modules are the results of interactive, self-adaptive functioning of many intermediate processing stages. There are *no independent signals* that unequivocally identify the existence or non-existence of errors or deviant behavior in these modules.

I will talk about each of these assertions.

What is the Error?

A missing approval on a return sale voucher or a missing receiving slip on a payment voucher does not identify errors of interest to the users of accounting

information. Unlike deviations in length, weight or color of physical objects, the observed deviations in the return sale and the payment voucher are not the characteristics which affect utility to the user. A credit for a return sale which should not have been granted is an error. But the unapproved credit is not necessarily an improperly granted credit. Worse yet, approved vouchers may include improperly granted credits. Because the processing of outputs is self-adaptive (not stupid), at different times the approval or disapproval may signify different things.

Whether or not it is efficient to track down unapproved credits in order to ascertain "goodness" or "badness" should be clarified by the material presented later in this paper. But for now, observe the ambiguity that comes to the auditor from ascertaining "goodness" or "badness" at lower levels of processing. Assume a finding, after investigation, that an unapproved credit is in fact appropriately and correctly issued. This could be a result of many causes:

- The credit was correctly prepared in the first place.
- The credit was corrected because of the review process even though the reviewer did not reflect his approval by initialling.
- The psychological impact of a pending approval motivated the preparer into doing proper work.
- The force of system interactions beyond the reviewer either brought about correction or created the psychological impact that motivated the preparer into doing proper work.

Expectations of Errors

With all the explanations and meaning that are possible when there are unapproved returned sales credits, the significance is slight whether approvals, undifferentiated as to significance, are present 99%, 95%, 90%, or 75% of the time. A prediction model for forecasting the frequency of future errors cannot be expected to be validated empirically when the model is derived from such data.

The interaction of approving return sales credits with other control steps can logically be expected to affect error rate. But the signals from other control steps are just as ambiguous as those for return sales credits. I cannot imagine how complex interactions of ambiguous signals can be used successfully to establish, empirically, expectations of errors to be found in the end-results of information processing.

A serious attempt to deal concretely with expectations of future error and, therefore, to compute reliance that can be given to internal control is set forth in an article by Barry E. Cushing.[5] This article was very useful to me. Although not the intention of the author, it identifies specifically the difficulties (impossibilities?) of computing the reliance to be given to internal control for catching those errors which affect the utility of information to the user. I simply want to point out a few things in this article that I think make my position clear.

First, the article does not deal with an interactive world but arbitrarily defines its world so that it has a mechanistic character. "A feedback control may provide a useful supplement to a system of preventive controls by monitoring the performance of a system. However, discussion of modeling techniques which

apply the concept of feedback is beyond the scope of this paper."[6] (This qualifying reference to feedback probably does not contemplate all the complex interactions and the teleological behavior which in fact exist beyond *direct* feedback mechanisms.)

Second, after excluding by definition a very important part of the real world, the author expresses the need for parameters among which are the following:

1) p = the probability that the process is correctly executed prior to administering the control procedure
2) P(e) = the probability that the control step will detect and signal an error given that one exists
3) Ve = the estimated average dollar effect of a single undetected error of type i on the balance of the account

He asserts about the required parameters: "The basic implementation problem . . . is the derivation of estimates of the probability and cost parameters . . . Estimates . . . can be developed from (1) records of error frequencies and error correction procedures maintained by clerical personnel who perform the control procedures and (2) data collected by internal or external auditors . . ."[7]

He also states: ". . . estimates for Ce and Ve for the case of embezzlement may be meaningless or impossible to estimate from past experience. . . If information of this type (experience about embezzlement) is not available, the reliability model may be of limited usefulness in examining control procedures which are intended to prevent embezzlement."[8]

Note then the circumscribed world to which the model applies:

- Excluded from the model are the efforts of interactive systems and of embezzlement. (The utility of information to users would not exclude these two factors. What is the significance of "Ve" computed with these limitations?)
- The called for parameters appropriately relate to *real* "errors," not to the frequency of omissions in an audit trail. (Real errors that can be reliably identified in the manner envisioned by the author must be mechanical, low-level operations with virtually no expectancy for self-adaptation or for changes from interaction. This excludes significant areas of the accounting process that are of great interest to the user of information and the auditor. Subsequent discussion gives support to this comment.)

Concerns of Auditing

Before attempting the important job of identifying the functional modules that are of intimate concern to users of financial information, I would first like to address some concepts about the fundamental concerns of auditing.

Accounting information constitutes a model. The model represents and, therefore, gives information about the status of a business system. This model involves accounting principles designed as a means—a language and a logic—for describing that which may exist in a business system. Thus a prime auditing question is whether that which has been *represented* as existing in terms of the model also *exists in fact.* An error, or non-congruence between the representation and the fact could come from several causes:

1) The language or the logic has been misused or misapplied, or is inadequate to fairly describe that which is known to exist.
2) An existing fact which the model contemplates should be identified has been overlooked or erroneously measured.
3) That which is known to exist in fact has *purposefully* not been described either by omission or by substitution of a description of a non-existent fact.

Recorded accounting information is the output of a living system. The status (health and condition) of the business system being represented is disclosed not only by giving the results from classifying the external and internal transactions into which the business has entered, but also by incorporating into the model relationships (attributes) that cast light upon the influence of these transactions upon future transactions. These attributes include collectability, saleability, recoverability, etc. Thus, the presence of certain attributes of assets and liabilities are recorded in addition to the bare transactions.

Attributes result not only from the nature of the transactions, but perhaps more importantly from economic events that occur or exist in the environment and from entrepreneurial decisions. Economic events include loss of market to competition (may affect saleability of inventories), new inventions that cause obsolescence, troubles in the business situation of customers, change in market prices, etc. Entrepreneurial decisions can obsolete products, plants, etc. or, contrariwise, they can keep life aflame in assets, such as investments made in research. In summary then, accounting information represents the state of a business system that results from the interactions of functional modules, as displayed in Figure 1.

A primary issue concerning the utility of the information is whether or not the results of the interactions of the modules shown in Figure 1 give a *fair presentation* of that which *exists in fact.* This issue extends much farther than whether transactions have been authorized and the mechanics of handling and recording are relatively error free. Auditing is challenged to face this broad issue in being measured as to its pragmatism and utility.

Modules of Recorded Accounting Information

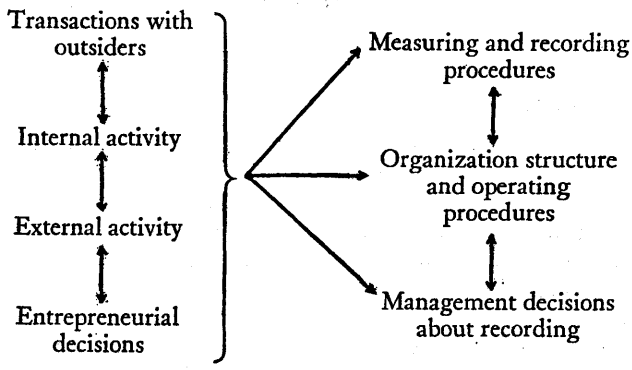

FIGURE 1

Errors in Complex Functional Modules

Several times reference has been made to functional modules that are of intimate concern to users of financial information. The presentation thus far has been directed towards making evident that such modules must involve recording functions at a level that is germane to the primary question of what the model represents as existing. Deviant behavior of these modules constitutes errors which affect the primary interest of the user of the information. I identify the deviant behavior that constitutes errors expressed in terms of such modules as follows:

1) Errors that relate to the recording of transactions:
   a) Monies received but not so recorded—representing diversion of receipts from credit sales, cash sales of merchandise and miscellaneous cash receipts
   b) Monies paid for non-business purposes (payments that divert monies of the business)
   c) Non-bona fide sales recorded
   d) Non-bona fide assets recorded—assets falsely represented as identified by count, and assets physically lost or stolen not recorded
   e) Liabilities incurred but not recorded
   f) Transactions classified or clerically processed so as to bring about misrepresentation of attributes which exist in fact
2) Errors in recording the occurrence or existence of external events, entrepreneurial decisions, and internal activities that affect those *attributes* of assets or liabilities which the model contemplates should be recognized

First, a few thoughts that may result just from studying the classification of errors presented.

One, the type of error that can be ascertained from an inspection methodology exists only in the last listed transaction module (1f)—a module likely to cause the least difficulty.

Second, the assessment of the significance of errors is *not* to be accomplished by ascertaining the dollar value of errors in an account balance. The account balance approach was contemplated in the article by Barry Cushing in his parameter Ve.[9] On the contrary, it is proposed that significance of errors (and utility to the user) is to be related to the business function being recorded. The functions identify and define roles that the user wants served in the recording system; an error is behavior that deviates from expectations of how the role is to be served.

Third, there may be all kinds of unauthorized execution (in the sense of lack of approvals, etc.) in the selected functions, but these "errors" do not add up to, or predict, or have a demonstrable effect upon the errors which concern the user.

Fourth, each of the user-level functional modules comprise many interacting functional elements at several hierarchical levels. Recognition of the nature of this complexity leads me to look to a discovery methodology rather than an inspection methodology. An illustration of the elements of one of the systems—Receipt of Monies from Credit Sales—is set forth in Figure 2.

FIGURE 2

Elements of System for Receipt of Monies from Credit Sales

Elements to be controlled	Operating and recording procedures (elements) From processing the transaction	From collateral activity	Events and conditions affecting procedures
Control of deposits:		1. Budgetary cash control and independent cash balance surveillance	1. Large checks only, making collection a matter of widespread management interest
Receipt identified	1. Listed upon receipt 2. Remittance advice saved		2. Numerous very small checks making mishandling cumbersome
Record Processing	1. Recorded independently of ledger clerk 2. Checked from opener's listings for date of deposit (a) Exceptions explored		3. Internal audit function
Deposit	1. Bank accounts reconciled; deposits in transit controlled by independent count		
Control of substitute credits:			
Billings:		1. Sales department interest in recorded sales (a) Budgets (b) Customer service (c) Commissions 2. Monthly financials *agreed* with books and furnished to sales department	1. Organization has only a few large shipments readily known widely by management 2. Budgetary control by a widespread management group supported by financials which are agreed with books 3. Internal audit function
(a) Shipments	1. Controlled shipping record 2. Shipments accounted for as billed		
(b) Recordings	1. Billings numerically controlled 2. Control established independently from ledger clerk		

FIGURE 2—*Continued*

Elements of System for Receipt of Monies from Credit Sales

Elements to be controlled	Operating and recording procedures (elements) From processing the transaction	Operating and recording procedures (elements) From collateral activity	Events and conditions affecting procedures
Customer credits	1. Independent authorization 2. Supported by receivers for returned sales 3. Audited for validity 4. Recorded independently from ledger clerk 5. Numerically controlled	1. Sales department (a) Budgets (b) Operating problems (c) Commissions	1. Internal audit function
Write-offs (bad debts, etc.)	1. Independent and highly placed authorization		1. Size and concentration of accounts—credit character and ready recognizability of customer
Follow up of uncollected items		1. Frequent account agings 2. Uncollected accounts followed by independent credit department 3. Independent trial balancing	1. Size and concentration of accounts 2. Internal audit function
Control over access to other monies	1. Original remittance advice forwarded to ledger clerk (deters lapping)	1. Cash not accessible to handlers of checks 2. Bank transfers available	

Anatomy of the Error-level Functional Module

Inspection of the Elements to be Controlled, shown on Figure 2, that can be found in a system for receiving monies without diversion, gives specifics on which to base some important conclusions: (1) Whether or not monies may be expected to be diverted need not be independent upon the existence, or the manner of application of one procedural element. (2) The interlocking of the elements provides the strongest and most meaningful assurance of whether or not there is compliance as to any one element. If one key element exists, a whole cluster must exist. (3) The non-existence of a control element, or low frequency in the number of times evidence exists of its application, is not of itself indicative of an error where it hurts: diversion or loss of assets.

There is an entire chain of systems available that can deter diversion of receipts that might result from failures in any one of the categories. Note that in Figure 2, the degree of control may be challenged in this sequence:

1) Are the incoming checks under direct control from the time of receipt until deposit?
2) If the incoming-check control suggests that checks could be diverted without a signal, is there any way to get rid of, or initially avoid the accountability charge on the books?
3) If the accountability charges are not eliminated, will there be effort to contact the customer?

This sequence of questions contemplates the manner in which major control elements interact. That there is extensive interaction of lower level elements with each other must also be apparent. At the major-control level the interactions extend to the elements comprising collateral activity, and to the nature of events and transactions, with the elements for controlling the processing of a transaction.

Reliance versus Understanding

Reference by the reader to the function of receiving monies, as an illustration, will help me convey what I believe the auditor must rely upon in order to formulate a judgment on the existence of deviant behavior—or non-congruence between that which is recorded and that which exists in fact.

It appears obvious to me that the auditor cannot simply use an inspection process methodology to observe unequivocal error signals that come from this module and conclude that an error does or does not exist. It also appears obvious to me that the auditor cannot rely upon the system to catch part of the errors and upon "substantive" auditing to catch an adequate portion of the remaining errors. There is only *one* error that either is discovered or not discovered: receipts of monies of a significant amount have been diverted. A realization about diversion either exists or does not exist in the auditor's mind.

In short, I do not believe that final *reliance* and, therefore, the confidence in a stated precision, comes from the sum of two *separate* contributions for discovering error. I believe there is only *one* source for an auditor's final reliance: the gut feel of a *critical,* competent human being who has developed an *understanding* (by combining hypotheses and empiric evidence) of the manner in which a functional role is being performed. In other words, the reliance of the auditor is belief in his judgment as to the nature of reality.

The *understanding* of the manner in which a functional role is being performed comes from asking questions and getting responses. Philosophers of science today assert that even in the most "objective" of sciences, understanding involves *intuitive* leaps. Understanding exists when a *critical,* competent person *feels* right. A critical person does not feel right unless he has touched base with an adequate number of his perceptions of facts, logical deductions, and visions of outcomes. His process is more simultaneous than sequential. Findings at one base don't settle the issues for the next base; bases cast light upon each other by being related like the chicken and the egg. The critical person touches base with countless perceptions that without conscious control present themselves to his mind; he considers whether or not they are relevant to the outcome he is struggling with. He gets hunches about relevance by combining the things he perceives; an answer satisfying to him may result. Above all he exercises judgment holistically.

In short, understanding is a creative act each time it occurs. Leaps occur that give new meaning to old facts. New relationships are faced, unexpected conclusions may be reached, stimulation for new follow-on steps may emerge. Decisions that come from reference to predetermined concepts are not creative. Perhaps the issue of how to make a decision by judgment is epitomized by the question of whether you *know* what you see, or you *see* what you know. I submit that creative thought is to know what you see. Reference to pre-established hierarchies leads to seeing only what you know, or worse yet, seeing what someone who isn't present once knew.

The Sample of One is Indispensable

If understanding comes from grasping and perceiving relationships among data which were initially unrelated; if achieving understanding is the process by which a human being makes a discovery; if understanding is built upon getting meaning from the answers to questions, then the sample of one is indispensable to auditing. The sample of one is the tool for asking those questions that can make answers meaningful. Inspection-type sampling of processing steps either is not pragmatic or is counterproductive for freeing the creativity needed to develop understanding—the creativity needed to discover.

From time to time, I have reached the same conclusions concerning a sample of one starting from different points than in this article: analysis by examining concrete and specific situations gives me particularly satisfying results about the pragmatism of such samples. For this article, however, space and time limit the presentation to mostly deductive arguments at abstract conceptual levels. To help somewhat in perceiving concretely the approach that I am advocating, an oversimplified illustration is presented.

Illustration of Auditing for Diverted Receipts

The functional module related to receipt of monies is utilized to provide an illustration solely because the material already provided in Figure 2 makes discussion of this module more understandable and meaningful.

In Company XYZ, the auditor finds a system that provides little direct control over checks received but little chance of substituting credits for any

diverted checks. He also finds that there is excellent follow-up by the credit department using an aged accounts receivable trial balance furnished by the ledger clerk. Thus, his overall view is that, in spite of lack of direct control over checks received, there is little opportunity for diversion of receipts, except that the aging furnished by the ledger clerk may not correspond with the data in the ledgers. Two alternatives may be considered for learning more about the attributes of monies received: either (1) compare the ledger with a recent aging furnished to the credit department, or (2) confirm with customers accounts with overdue balances. (It should be noted that, in this example, *one* test of the attributes of aging in the latter part of the period would be sufficient to form a judgment. At any point that the credit department receives valid information about accounts, the auditor's findings are that strong contact with the customer may be expected. Diverted receipts handled in this manner should not long remain undetected.) The auditor chose to confirm overdue accounts shown on the ledger, but since many accounts were with chain stores, confirmation replies received (after specific follow-up efforts) covered only a minor portion of these accounts.

Under these circumstances, the auditor determined that his next questions should be asked by performing either one or both of the following steps:

1) Compare the ledger with the most recent aged trial balance used by the credit department for follow-up.
2) Ask customers to confirm the unpaid status of specific past due invoices.

My experience leads me to believe that the methodology used by our illustrative auditor will give him a better basis than the usual auditor has for forming a judgment about receipt of monies. Current audit methodology would probably differ from that in the illustration in several important respects:

1) Non-replies to confirmation requests would not be followed by checking of an aged trial balance actually used by the credit department; chances are attempts to confirm specific overdue invoices would not be made. (The *meaning* of the customers' non-responses to the usual auditor would be different from that for the illustrative auditor of Company XYZ.)
2) Emphasis on confirming overdue accounts receivable would not be developed from the review of internal control.
3) Status of control over processing of checks would not affect the *number* of confirmation requests to *any* accounts. The issue concerning check processing would be weighed with other controls involving receivables to decide if control is weak, ordinary, strong, etc. At best, this evaluation would be the controlling influence on how *many* confirmations to send but it would not influence to whom they should be sent.
4) If the overdue customers' accounts were in the sample of confirmations requested, non-reply would not stir further action that differs from the action taken for non-reply to other customers' accounts.

If the two audit approaches are to be evaluated in terms of pragmatism for discovering diversion of receipts, then if diversion exists, the approach used in the illustration must be seen as superior. Information theory defines infor-

mation as the existence of interrelationships which constitute constraints upon behavior; thus information constitutes a *reduction* in the *uncertainty* of behavior—random behavior means non-existence of information, i.e. non-existence of, knowledge about relationships. More relationships concerning receipt of monies will be recognized by our illustrative auditor than by our usual auditor. There will be less uncertainty for our illustrative auditor (his gut can feel better) than there will be for our usual auditor if he were to consult his anatomy.

The problem for our current auditor, expressed in less formal language than by the use of information theory, is that he is not motivated by his methodology nor does he have adequate information with which to think through what he has available for judgment about a specific function. His methodology does not encourage finding interrelationships to give him a gut feel; his emphasis is on sufficient (as defined by authority) evidence to "verify" individual pieces as though they exist independently. So, for non-receipt of replies to confirmation requests, he refers to standards and practices for what to do next. He asks if he can accept examining subsequent payments of the account or if he must examine shipping records. He does not personally attempt to evaluate what the steps contribute to a particular situation on a particular audit; rather, he asks what he must do in order to comply with authority.

Sample-of-one Questions Find More Interrelationships

Broader inferences can be drawn from the illustration by relating the audit work done by the illustrative auditor to a conceptual framework. A framework for classifying the steps available to an auditor for increasing information (and thus reducing uncertainty) follows:

1) Ascertain *interconnections* that exist between transactions, events and entrepreneurial decisions, and direct processing steps, operating procedures, collateral material and recording decisions (the modules of Figure 2).
2) Ascertain the actual processing work done—this to include what was perceived by the worker, his response to what he perceived, the interactions with other work, and responses to that interaction. (Data needed to meaningfully determine the nature and quality of work done.)
3) Ascertain the nature of the audit trial and the extent of its existence.
4) Obtain representations from the sources of existing or potential transactions, events, and decisions and compare these representations with recordings in the accounting records. Representations from the source of the occurrence must not be taken from the medium or channel regularly used for communications to the accounting system.
5) Obtain representations from sources (both inside and outside the Company) other than the accounting records to develop data for casting light upon the existence of attributes of recorded information.
6) Develop symptoms by examining recorded representations and utilizing internal logic to channel inquiries directed to discovery of the non-existence of expected interconnections. (Internal logic refers to the dualisms which bring about expectations that a pair must exist if one thing is represented to exist. Some few examples are: interest

expense with debt, property taxes and insurance with real property, current age of accounts with collectability and bona fides, twelve monthly charges with annually rented property, rise in sales prices with increased dollar amount of sales when there is no increase in physical deliveries.)

I maintain that opportunity for discovery increases when the mind has acquired an increase in data which is amenable to the forming of interrelationships which are specifically related to the objective. (Interrelationships are data converted into information.) On this premise, an increase in pragmatic power occurs in each of the classifications of audit steps shown above, if the steps are directed to developing separately information about each of the functional modules in which "errors" are significant to the user. For each such functional module, the following table shows how the relationship of each of the six audit-step classifications is viewed with respect to its usefulness for understanding the functional module, and in turn, to the usefulness of developing further information separately by sub-categories of the module.

		Specific understanding needed for:		
Audit-step classifications	Usefulness for understanding the module	Categories of events, transactions and decisions	Short periods of time	Used in illustrative case
1.	Essential	Yes	Ordinarily no	Yes
2.	Impractical	Yes	Yes	No
3.	None	....	....	No
4.	Essential	Yes	Yes	Potentially yes—to confirm specific overdues
5.	Essential	Yes	Ordinarily no	Yes
6.	Essential	Yes	Only as self-indicated	Yes (eg., aged trial balance, or confirm response)

Comments about the audit-step classifications and other items in this table follow.

Previous discussion has been directed to explaining why audit-step classifications 2 and 3 are indicated as having low priority when they are evaluated by the test of pragmatism and utility.

Audit-step classifications 1, 4, 5 and 6 are contemplated to contribute to the

final judgment only in their combination, not separately. For example, the non-return of confirmations (audit-step classification 5) in the illustrative case is also a symptom (audit-step classification 6) from which meaning emerges when related to information developed about interconnections (audit-step classification 1). But in turn, more is known about interconnections than can be gleaned from audit-step classification 1 standing by itself. The meaning given by audit-step classification 1 to results in the other audit-step classifications, creates meaning not previously existing. Thus, there is *no separate or additive reliance,* only an integrated reliance. The final reliance is based on *information not even partially present* in any one of the classifications *separately.*

Questions, incited or driven by symptoms relevant to a particular function, can be expected to lead to answers that give more information about each particular function than questions asked randomly (without being driven by symptoms) over all functions combined. Increase in information may similarly be expected to be developed with respect to transactions, events and decisions if questions are driven by symptoms relevant to individual categories underlying that which occurred in the business system. The existence of order (information) within each functional module about such things as geographic areas, large transactions, productive material versus supplies versus services, bar steel versus hardware, large customers, single source-of-supply vendors, etc., increases the opportunity for the mind to leap to creative relationships. In statistical theory, ascertaining whether one or more "universes" are present, also stratification, is somewhat analagous to developing specific understanding in significant categories. The impact of this upon a "sample of one" will be discussed shortly.

Attention is directed to the tremendous importance of directing audit-step classification 2 towards developing representations from the sources about the existence of *events and entrepreneurial decisions.* The utility of accounting information often may be more affected by these factors than by transactions. Non-directed questioning, or sampling (or even *completely* examining transactions), as a means of following the audit trail does not provide adequate understanding of significant events and entrepreneurial decisions.

Is understanding increased by isolating information to short periods of time throughout the year? The view reflected in the table is that only for audit-step classification 4 (representations from the sources about events, etc.) is time always significant. For audit-step classifications 1, 5 and 6, the nature of the initial inquiries casts light on whether a spread over time is significant. Ordinarily, audit-step classification 5 gives adequate understanding through inquiring about cumulative results. An example of such inquiring is in the illustrative case.

How the Sample of One Works

The assertion has been advanced that the discovery process for auditing is satisfactorily concluded when a *critical,* competent person *feels* right about interrelationships in his mind. The interrelationships consist of concepts and experiences that are relevant to objectives he has undertaken to accomplish. He has brought the interrelationships to that concluding point by asking questions prompted initially by his previously experienced relationships with analagous subject matter; his subsequent questions are prompted by the interrelationships

experienced after answers to his question are obtained. When he no longer is prompted to ask questions, he understands, he feels right, and he can shout *Eureka!* The shout expresses the satisfaction that comes from having successfully combined logic with an intuitive leap beyond that indicated by the data.

In my approach, the sample of one denotes a methodology for asking useful questions when one is engaged in the discovery process. For auditing, the sample of one embodies two concepts:

1) Each question is framed so that the answer is required to be in a form that eliminates ambiguity as to whether communication exists between questioner and responder. Wherever possible, this calls for answers in the form of an existing example that is responsive to a request to "Show me one."
2) Each question is designed in keeping with the expectation that the sample produced will provide information useful for framing a next question; expectations do not exist that samples will produce information that independently establishes or substantiates reality.

Since the incidence of questions is largely dependent upon the answer to the preceding question, an inherent quality of the sample of one is that the pattern of coverage will vary from engagement to engagement, as well as, from year to year. Consider that auditing with the objective of discovery is akin to hunting. A hunter catches up to his quarry by learning its fixed patterns; if a hunter's patterns are fixed, he can be made into the hunted.

A sample constituting one example provides optimal increase in information (relationships brought to mind) when it is obtained from a highly ordered process. The high degree of order removes uncertainty as to the meaning of the sample; its message is clear. A second example under these circumstances can give *no more nformation* than the first.

This concept of the relationship of order to meaning is evident when considering a blood sample. Only one sample is taken. Its meaning is clear because of the high degree of order that prevails in the blood system. Observe that the high degree of order removes uncertainty as to the meaning of the sample, but the order in no way removes uncertainty as to whether the blood will show deviant behavior (an error in good functioning).

The auditor's commonly held intuitive feeling that increased control in a system warrants a smaller sample must be founded upon this sense of needing fewer examples for understanding. However, there is no sound basis for the extension of the feeling about reduced uncertainty in understanding so that it includes reduced likelihood of error or deviant behavior. In statistical quality control deviant behavior is asked to speak for itself—it is not inferred from the orderliness of the machine that produces the product.

If "errors" must be discovered by developing increased information, a second sample of blood is not taken. Other interconnections are made. So in auditing, samples of one are logical, but it is not logical to use size samples where "strong" control exists. Note that if a system ordinarily expected to be orderly has no order, this too is determinable from a sample of one. If meaning is obliterated by uncertainty, then again, more meaningless samples do not increase information. For example, a sample of petty cash vouchers found to be prepared in pencil gives all the information obtainable from them—their

meaning for control is uncertain. Examination of more vouchers prepared in pencil will not reduce the uncertainty.

The concept embodied in a sample of one is applicable to all of the audit-step classifications deemed useful for the process of discovery. This covers classifications 1, 4, 5 and 6 previously discussed. What this contemplates for each category will be made more concrete.

For audit-step classification 1, ascertainting interconnections between occurrences with processing (including the interconnection between processing steps) and collateral material, the sample of one approach contemplated is straight forward. Following the concept that orderliness reduces uncertainty of understanding, the questioning is effected by drawing samples. This contemplates working along paths that reflect functional relationships, using representative categories of occurrences. For example, one payment voucher for each representative vendor, or for each representative material, service, etc. is traced through all of the elements related to the payment cycle. Holding the same sample throughout the processing cycle increases the information about the interconnections of the processing and of the occurrences. The same payment vouchers should be taken through the engineering department, the procurement department, the receiving department, etc., etc.

Answers received at each stage should always be utilized for framing the next question. Expectations of the manner of processing in related stages are developed from answers to questions. Answers received should be particularly considered for whether the sampled items in fact represent homogenous categories. Also note that an ambiguous answer always warrants or requires a new sample of one to determine whether the ambiguity is representative of what is to be found.

For audit-step classification 4, obtaining representation of occurrences from the source (sometimes including sources outside the company), the questioning initially follows the pattern just described. Working along functionally related paths the auditor looks for samples of representations of what in fact occurred. What's happened this year? Did prices go up? Has the number of customers increased with whom the company dealt? Have new products been developed? What has been the obsolescence problem? Have new markets been entered? Is the company getting advertising behind new products? Has the support of any products been dropped? Within each department the auditor would want to ask about what information is used for decision making, what written information there is concerning the matters discussed.

Representative samples of one, developed at the sources of occurrences, may be used to frame questions to the accounting recordings. In most cases it is likely that the question can best be asked by comparing an aggregation (either regularly available or specifically computed) from the source with an aggregation of results reflected by the accounting records. The concept previously given that identifies a sample of one is embodied in this form of questioning. It constitutes *one question* "designed with the expectation that the sample produced will provide information useful for framing a next question." The distinguishing characteristic of the sample of one is that the work is *one step* that is part of a purposeful process; it is not an inspection step that exists independently of the entire audit process.

In this same sense *random sampling* and statistical theory could be utilized to develop an estimate of the aggregate effect of occurrences, as represented by the source, for asking *one* question to obtain one sample about the recording of these occurrences.

For audit-step classification 5, obtaining representation from outside sources for casting light upon recorded attributes, the concept embodied in a sample of one is again present. This audit step is concerned with confirmation in its generic meaning—i.e., "added information." Nonaccounting-department data provides a source of confirmation that auditors seldom utilize.

For the sample of one philosophy to be followed, "substantive" audit steps must be converted from being viewed as the upper hierarchy of evidence (hard evidence) obtained to prove that an account balance is substantiated, to being information gathered for answering a question about the interconnections in a function.

For example, the existing practice with respect to customer confirmations replies records the dollar proportion of the total customer accounts that have been "confirmed." The initial selection of accounts to be confirmed is unrelated to a question about a function. The meaning of the replies cannot be and is not looked upon in the light of the interconnections that exist in those functional modules which are significant as to "error" characteristics.

To change this approach, the relationship which the customer's confirmation reply can have to the functional modules must be identified. These relationships are:

1) Bona fides of the account (the sales recording function)
2) Unpaid status of the account (the receipts diversion function)
3) Disputes over charges (the function of recording events that affect attributes to be recognized)

The initial requests for confirmation must be influenced by the next question that needs to be asked about these functional modules. As in the situation of the illustrative case, this both brings about different selections of accounts for confirmation and changes the meaning of the replies.

Where an attribute to be sampled is distributed over a large number of homogenous accounts, random sampling is appropriate. (But confidence limits are not a dependent variable of "reliance" upon control.) The aggregate result will permit asking one question for each attribute being sampled.

In the same way, confirmation (getting added information) must proceed in connection with each of the "error" functional modules. Particular emphasis must be placed upon the functional module relating to attributes; this stimulation may bring about the change in audit methodology that turns out to be the most significant.

Conclusions

The question How much testing is enough? asked so many times over the past forty years was the wrong question. We needed to first ask whether auditing is an inspection process or a discovery process. The right question was whether the auditing problem is to *see* what you know, or to *know* what you see. Further, we needed to make clear to ourselves that the resolution of this question is to be governed by pragmatism and utility to the user of information.

When this fundamental issue is resolved, the methodology to be used for sampling readily becomes clear. I believe resolution in terms of pragmatism and utility leads readily to the conclusion that auditing calls for methodology appropriate for asking questions about the nature of subject matter that does not emit unequivocal signals. Auditing is a process of discovery, not observation of signals. If the resolution were that auditing is an inspection process, the sample of one is indefensible; if auditing is to *know* what you see, the sample of one is indispensable. Our present methodology implies the pursuit of a philosophy of auditing consistent with seeing what you know.

The discovery process successfully functions as a mixture of science and intuition. Science must contribute guidelines that encourage and assist human creativity. I believe that the most important such guideline is that the audit effort should be built from, around and related to functional modules relevant to error determination. Clear identification by the profession of these modules is the first order of business. The conceptual analysis and comprehension of audit steps available, in the manner set forth in this article, also is an important guideline to assist creativity. Comprehension of the strengths, weaknesses, and nature of the methodology involved in the use of the sample of one, must be in the tool kit of a discoverer. Certainly not least, the auditor should know systems theory and technology and be highly conversant with business system practices.

The content of today's auditing standards is the most significant manifestation of the audit philosophy presently being advocated. When the standards assert that the auditing process is driven by symptoms, not by mandatory procedures, we will know that the auditor as a discoverer—as a creative human being—will have been encouraged.

I believe the most significant change that the sample-of-one philosophy of auditing would bring about is the new discoveries of the non-congruence between the representation and reality of attributes that come from events and entrepreneurial decisions. Relating the significance of auditing results to functional modules rather than dollar balances of accounts might even bring insights on dealing with the attribute which is an ever-present bogeyman—the going concern question.

Adoption of the advocated sample-of-one philosophy must introduce a challenge to the organization and professional staffing of public accounting firms. I believe the challenge is: can the responsibility to society, evaluated in terms of pragmatism and utility, be met by organizations designed for mass production and staffed with professionals educated and trained to be dependent upon direction and control from the top.

Footnotes

1. The views expressed are the author's; they do not necessarily correspond with those held by the author's firm.

2. See A. A. Sommer, Jr., "What Are the Courts Saying to Auditors?" *Auditing Looks Ahead,* Proceedings of the 1972 Touche Ross/University of Kansas Symposium on Auditing Problems.

3. The meaning given to "sample of one" is an extension of that presented in "Some Observations on Statistical Sampling in Auditing," by Howard F. Stettler, *The Journal of Accountancy,* April 1966. The meaning for the present paper emerges at later points in the paper.

4. See "Must We Revolutionize Our Methodology?" Robert A. Raitt, *Interfaces,* February 1974, pp. 1-10; "Science in the Systems Age," Russell L. Achoff, *Operations Research,* May-June 1973, pp. 661-671; "Reliability of Models in the Social Sciences," C. West Churchman, *Interfaces,* November 1973, pp. 1-12.

5. Barry B. Cushing, "A Mathematical Approach to the Analysis and Design of Internal Control Systems," *The Accounting Review,* January 1974, pp. 24-41.

6. *Ibid.,* p. 25.

7. *Ibid.,* p. 38.

8. *Ibid.,* p. 39.

9. *Ibid.,* p. 38.

Discussant's Response to The Sample of One: Indispensable or Indefensible?

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Before examining in somewhat greater detail the content of Mr. Boni's stimulating paper, I would like to establish my perceptions of the primary differences between the "Sample of One: Indispensable or Indefensible" and Howard Stettler's classic original article of which this is an extension, "Some Observations on Statistical Sampling in Auditing."[1] My reason for doing this in no way is to criticize Boni's paper, but rather to demonstrate that the basic concepts so well known from Stettler's article are completely different from the ones included in this paper.

The relevant section in Stettler's article is where he rejects the recommendation of the AICPA Committee on Statistical Sampling for use of reliability levels of 50 to 95 percent confidence for compliance testing and states instead:

> By contrast, it is my contention that the auditor may properly ignore the question of sample reliability when adequate controls over internal control are present, reducing reliability practically to zero, so that only one of each type of item need be tested. On the other hand, if internal control is deficient, the auditor's modification of his examination should not be in the direction of increasing sample size for his tests of transactions to achieve increased reliability for his conclusions about compliance with the system of internal control. The sample of one of each type of transaction should suffice to indicate that the system such as it is, is operative, and a larger sample that would disclose the extent of compliance helps very little in assessment of the fairness or propriety of the account balances produced by the system.[2]

The point Stettler was making, using the terminology of SAS #1, section 320, is that compliance testing is not necessary beyond a walk-through test to help understand the system and that the emphasis should be on substantive testing.

Boni takes a similar but much broader view of the meaning of a sample of one. Although he certainly believes in the concept of a walk-through test, his use of the term "a sample of one" is a much broader concept than Stettler's. He gives an example near the end of the paper where a sample of confirmations of accounts receivable is used to test for aging and other attributes of interest. Since the items included in the sample are dealing with one question, the test is referred to as a part of a sample of one. Similarly, he also talks about compliance tests with a random sample and statistical theory being used to estimate the aggregate effect of certain occurrences.

While Stettler restricted his use of a sample of one to a sample of one or

two items, Boni's sample of one pertains to both compliance testing and substantive testing, and it can include sample sizes of more than one. This use of a sample of one, as stated by Boni in his paper in footnote 3, is an extension of Stettler's concept. It also makes it a considerably different concept.

Boni's Integrated Approach to Auditing

Instead of a paper discussing the concept of a sample of one in the sense used by Stettler, my perceptions are that the paper deals with the notion that the individual parts of the audit should be carefully integrated with the overall objectives of the audit rather than treating each part independently. The basic concept Boni deals with involves asking intelligent questions in all aspects of the audit and interrelating relevant parts of the audit by understanding the client's system and following up on inquiries and the responses to the inquiries. In this context, many excellent and useful comments are made throughout the paper.

Since there are parts of the paper with which I am in agreement and other parts where I disagree, I have chosen to limit my comments to Mr. Boni's paper rather than digress into writing a separate paper on the subject. It is always tempting for a discussant to depart from the assigned topic and write a completely new paper on a related subject. In this case, I prefer to avoid that temptation.

Areas in Which We Are in Agreement

Although it is not feasible to state all of the areas where Boni and I agree in his paper, the following areas of agreement should suffice to demonstrate that I support most of his basic ideas. The areas where we agree are not listed in any order of importance and are not meant to be mutually exclusive. Since these areas where we agree are discussed more extensively in his paper, there is little need for extensive elaboration here.

1. Auditors should be concerned about transactions with outsiders, external economic conditions, and entrepreneurial decisions that affect the financial statements. More emphasis should probably be placed on external economic conditions and entrepreneurial decisions both in auditing research and in practice.
2. The auditor must understand and evaluate the client's system in the broad sense of the use of systems. This includes the accounting system, personnel, interrelationships between people, the overall organization, the marketing organization to the extent it is relevant to the audit, etc.
3. The development of the audit tests should be based on an understanding of the client's system and should emphasize efficient tests to locate errors that are expected to exist.
4. The auditor should not simply comply with auditing standards in a rote manner independently of the unique circumstances of the audit. A mechanical approach to auditing is unlikely to result in a well-performed audit.
5. Intelligent questions should be asked throughout the audit and they should be the basis for further questions. When auditors do

not have inquiring minds, there is increased likelihood of overlooking errors.

6. Questions asked in a systematic manner about the system are more useful than random questions. The questions should be framed in a logical fashion that aims toward a complete understanding of the client's system.
7. The sample results of every sample should be carefully analyzed to determine the impact of the errors on the system.
8. Substantive test results should be carefully analyzed to evaluate their impact on the client's system. The tendency to evaluate substantive errors only in terms of their impact on the financial statements should be avoided. It is important to determine and understand the system weakness that permitted the error.
9. Once the auditor understands the client's system, he should not expand his sample to get a greater understanding of the system. The tendency of automatically increasing the sample size whenever errors are found should be strongly resisted. Naturally, there are instances where it is appropriate to increase the sample beyond the original initial sample.
10. Errors and exceptions of all types must be directed at determining their impact on financial information. From an audit point of view, only errors in the financial statements directly affect the auditor's opinion. All errors should ultimately be evaluated in terms of the effect on the statements.
11. Creative discovery of problems is highly desirable. It is necessary to be constantly on the alert for the unusual, to ask relevant questions and obtain satisfactory answers, to develop meaningful and relevant audit programs that meet specific objectives and to avoid being mechanistic in performing audit responsibilities.

One area of the paper where I believe a particularly useful contribution is made by the author is in his extensive discussion of errors in the functional modules. He demonstrates clearly that errors discovered in most auditing situations are highly complex and must be analyzed carefully to determine their cause and their implication on the audit. As a part of this discussion of errors, the comprehensive table that was developed for "The Elements of a System for the Receipt of Monies from Credit Sales" is especially useful. It demonstrates clearly the difficulty of evaluating systems of internal control and modifying audit programs for weaknesses in the system. An extension of the table to include other areas of interest to the audit would be a meaningful contribution.

There are also several areas in the paper where Mr. Boni and I hold different views. It is these areas where the remainder of the critique will be directed.

Comparison of the Worst Aspects of Existing Practice to a Theoretical Approach

In several parts of Boni's paper criticisms are made of existing auditing methods that to me reflect weaknesses in the day-to-day performance of the audit function, rather than shortcomings of existing auditing concepts. It is almost certain that any practicing auditor who frequently performs the review function will find that there are many audits in which there are weaknesses in the application of good audit theory.

It does not seem to be justifiable to compare the conceptual and somewhat esoteric approach advocated by Boni to the worst aspects of the practice of public accounting that are encountered in the review of working papers or discussions with practitioners. It is likely that if the approach recommended by the author were adopted in practice, there would be equally significant shortcomings encountered as a result of the pressures of time budgets and as problems arise in applying theory to practice.

Three examples from Boni's article of his criticism of existing auditing philosophy should be sufficient to demonstrate the point that his criticisms are of existing auditing practice rather than the current body of theory.

1. *Statistical sampling in auditing is referred to as a mechanical process.*

Statistical sampling in auditing should be exactly the opposite of a mechanistic approach. To the extent that it is mechanistic, it is a reflection of the poor practice of public accounting rather than poor theory. There are several aspects of statistical sampling that tend to make it non-mechanistic, when properly applied. These include requirements of formally specifying the objectives of the test, definition of the population about which the auditor plans to generalize, definition of an error, and perhaps most importantly, an intensive follow-up of all errors discovered in the statistical test. It seems to me that careful tests of the client's system using statistical methods are completely consistent with an imaginative, integrated approach to auditing.

2. *There is reference to the fact that auditors do not relate things to each other, but rather follow a mechanistic approach.*

There is extensive professional literature to demonstrate that auditors should interrelate different parts of the audit into an overall conclusion rather than follow a mechanistic approach to auditing. For example, virtually everyone in auditing agrees that tests of sales transactions should be related to confirmations, cash receipts tests, and other aspects of the audit. Nevertheless, in practice there may be a tendency to fail to integrate sales transactions tests, confirmations, and sales cut-off tests as much as is probably desirable. Again, this is more a reflection of weak practice than of the existing body of available auditing concepts.

The extensive illustration that Boni offers of the elements of a system for the receipt of monies from credit sales is an excellent contribution to the complex interaction of different elements of the system, but if practitioners were to follow this approach on a day-to-day basis, it is likely that there would be many instances of deficient or improper application. These aberrations would not be a basis for concluding that Boni's proposals are not appropriate or relevant. It would be unfair to criticize his approach to audit program development on the basis that some, or even many, practitioners were applying his concept improperly.

3. *It is implied that auditors do not evaluate external conditions and management decisions as a part of the audit process.*

When auditors do not evaluate external economic conditions and the deci-

sions made by management while they audit, there is a significant deficiency in their audit performance. It is essential that auditors consider such things as the product selling price in the subsequent period as a part of inventory valuation, and general economic conditions in evaluating the allowance for doubtful accounts. Similarly, auditors must determine whether management decisions in such areas as charge-off of bad debts, inventory obsolescence write downs, and capitalization of fixed assets are in accordance with generally accepted accounting principles and are consistent with the preceding period. Although there is a need for additional research in more appropriate methods of evaluating external conditions and management decisions in the audit process, both of these are currently necessary as a part of good auditing.

In summary of this section, I believe that Mr. Boni has compared some of the worst aspects of existing practice to his theoretic approach. As might be expected, whenever practice is compared to a concept or theory, the existing practice comes out a very poor second. In my opinion, a good portion of Mr. Boni's criticism of auditing in this paper is a criticism of what sometimes occurs in practice, and most auditors would be similarly critical.

Relevance of Compliance Testing in Auditing

A major area where Mr. Boni and I apparently are in substantial disagreement is the relevance of compliance testing as a part of the entire audit process. This comes up indirectly in several places, but is specifically stated in the early part of the paper when he asserts that "The signals emanating at the processing stages do not provide information that can be demonstrated to be useful for establishing empirically the expectation for errors in the aggregated end results of the processing."

Depending upon how expectation of errors is interpreted, this statement implies to me that compliance testing is not useful for prediction of monetary errors in the financial statements. This is a very strong statement and inconsistent with my interpretation of most existing professional literature. In order to better understand the nature of our disagreement, a brief summary is given of my interpretation of Section 320 of SAS #1.

1. The initial review of internal controls is performed to determine the controls the client believes to be in effect. This is done through flowcharting, internal control questionnaires, walk-through tests, and discussions with the client.
2. The extent to which the auditor is willing to rely upon the existing controls to reduce his substantive audit tests is determined by the auditor under the assumption that the apparently existing controls are actually operating effectively. When the existing controls reduce the auditor's expectations of monetary errors in the financial statements, the auditor should normally perform compliance tests and then reduce the substantive tests accordingly if the compliance tests indicate an effectively operating system. The compliance tests should not be performed if the expected cost of the compliance tests exceeds the reduction of cost of substantive tests resulting from relying upon the client's system. This could result from relatively ineffective controls or a high cost of the particular compliance tests.

3. The auditor must perform compliance procedures to test the controls that will be relied upon to reduce the substantive tests. Naturally, these tests must be done intelligently and with great care. In many instances, the tests will be done jointly with substantive tests, again under the still unproven assumption that the compliance tests will establish that the client's controls are likely to effectively reduce the likelihood of errors.
4. If the compliance tests yield good results, the auditor can rely upon the client's system to reduce the substantive tests as originally planned. If the actual tests indicate the client's control system is not operating effectively, he cannot rely upon the system to reduce the substantive tests. A careful evaluation of the nature of the compliance errors and why they exist must be made at this point even though the system cannot be relied upon to reduce the substantive tests.

There are at least four implicit assumptions underlying the philosophy of using compliance testing as a means of reducing substantive tests. These are as follows:

1. It is possible to relate particular controls in a system to a final dollar balance aggregate. For example, specific controls over recording sales must in some way be related to the final dollar balance in the sales and possibly accounts receivable.
2. The existence or non-existence of a particular set of controls in a particular environment significantly affects the likelihood of dollar errors in the related financial account(s).
3. The degree of compliance with the control system significantly affects the likelihood of dollar errors in the related financial account(s).
4. When compliance deviations exist, a predictable effect on the dollar errors on the related financial account(s) is possible.

It is apparent that Mr. Boni rejects one or more of these basic assumptions in concluding that the errors detected in testing the processing stages do not aid the auditor in establishing the expectation of dollar errors in the final dollar balances. The only ultimate test of the validity of the above assumptions is in an extensive empirical test of them by relating actual errors discovered in different client systems to the existence or non-existence of particular controls and to the extent of compliance with the controls by the client's employees. Since this has not been done formally in any reported research results, there can be no absolute assurance that any of the four assumptions are valid.

If the assumptions are invalid, organizations that set up sophisticated systems have been wasting resources in setting them up. In addition, it would imply that auditors who have been evaluating and testing controls have also been inefficient in their approach to auditing. Since companies continue to spend considerable resources to set up complex systems of control and to utilize extensive compliance procedures to assure system effectiveness, it seems likely that the controls serve a useful purpose. It is unlikely that most clients would waste money on ineffective controls. Furthermore, auditors do have considerable experience in evaluating the effect of clients' internal controls on final financial aggregates. Since auditors continue to test clients' systems by compliance tests, that is some evidence, but certainly not conclusive evidence, that compliance tests are useful.

Although there is no irreputable empirical evidence to support either Mr. Boni's position or mine, I conclude deductively that different client control systems and the extent to which these controls are operative have an effect on the likelihood of errors. Furthermore, when auditors carefully evaluate the client's system and test the system in a prudent and reasonable manner, I believe the results of the tests are also useful in determining the necessary substantive tests.

Other Areas of Disagreement

There are several other minor areas where Mr. Boni and I do not agree. This final section will briefly discuss three of these.

First, is Mr. Boni's statement that "the use of tools that bring about conformity and control of work is inconsistent with good auditing." I disagree strongly with this statement. Although I concur that rote mechanistic work is undesirable, it does not follow that the use of tools such as statistical sampling should or will result in mechanistic auditing. Specifically, it seems to me that statistical sampling can, and usually does when properly applied, provide a higher quality of audit performance. For example, the use of random sampling and the measurement of sampling error in statistical applications provide great potential benefit without reducing the auditor's judgment.

Second is the author's criticism of the combining of compliance testing and substantive testing into an overall level of reliance as suggested in Appendix B of Section 320 in SAS #1. The combination of evidence into a final overall conclusion is always done either implicitly or explicitly on every audit. The author's method of combining evidence from interrelated activities subjectively by asking questions and seeking answers is highly complex and difficult to do. I do not see any great difference between his approach and the somewhat more formal and objective approach stated in SAS #1. Again, I agree wholeheartedly that combining different tests should not be done mechanistically or rotely, but more sophisticated methods of combining evidence should be recommended. The article presented in this symposium by Bill Felix on the use of decision theory in auditing is a far more sophisticated and potentially useful method of combining different tests than the methods recommended in SAS #1.

Finally, I disagree with Boni's notion of the desirability or acceptability of a "gut feel" or "intuitive leaps." It seems to me that attempts at logical conclusions based upon actual evidence should be encouraged and emphasized in the professional literature. In recent years where there has been considerable pressure from legal liability it is essential that audit evidence be as defensible as possible. "Intuitive leaps" and "gut feel" hardly seem adequate legal defenses.

Summary and Conclusion

Greg Boni's article is long and sometimes difficult to interpret and comprehend, but many of his ideas are imaginative, stimulating and certainly worthwhile to think about by anyone interested in auditing. In a paper with so many existing auditing conventions rejected, there are almost certainly some parts of the paper with which virtually every thoughtful reader will disagree. At the same time, many of his feelings and philosophies about auditing will appeal to

anyone who understands auditing. Yet, the most important contribution in the paper is that it does provide a vehicle for stimulating thoughtful discussions about the objectives of audit evidence accumulation and alternative ways of satisfying those objectives.

Footnotes

1. *The Journal of Accountancy,* April 1966.
2. *Ibid.,* p. 58.

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The Case for Continuation of Mandatory Independent Audits For Publicly Held Companies

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When I was asked to speak on this topic I will have to admit that I did not initially view it as a hot one. Nevertheless, it did seem desirable to look once again at the somewhat strange phenomenon called an audit by an independent public accountant to see whether or not the conventional wisdom which asserts its necessity is justified.

How Much Independence?

The first question to be considered is whether or not, in fact, we want totally independent audits. Here I think the answer is probably no. Independence does not necessarily lead to assurance, and absolute independence, which would require elimination of all dependence on communication with clients, would be bad news indeed. The ultimate independent audit would be where the auditor arrives on the scene, is handed the financial statements and the books, and talks with no one within the company. I think we could agree that such an audit would very likely be a rather bad one since an audit depends on candid communication between auditor and client in order for the auditor to develop the necessary thorough knowledge of the company and its business which he must combine with a knowledge of the accounting measurement model.

What we do want, therefore, instead of absolute independence is a dispassionate unbiased professional review of financial statements. In addition, we expect auditors to be proficient in the measurement and communication of financial information, and to assist their clients as necessary to insure adequate reporting to the public.

Parties at Interest

As indicated above, an audit is a rather strange creature and not at all the way in which it is perceived by most outsiders. In an overwhelming majority of cases, the audit is essentially a cooperative effort because the interests of management, the auditor, and the public coincide. In these engagements the

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auditor has as his principal responsibility a review of the adequacy of financial information systems of the firms with emphasis on the needs of the outside investor. In this review, the auditor should also be aware of the information needs of management and, as necessary, make appropriate recommendations to improve management's control of operations. The auditor's role then is twofold —attestation and consultation. The auditor uses his professional skills and absence of bias to bear public witness to the reliability of financial information included in an annual report to shareholders and to work with management to improve the usefulness of the financial information system for both external and internal reporting purposes.

It is worth noting that in a cooperative audit engagement even a bad audit does not have a very high social cost because when the financial statements prepared by the client do present fairly the results of operations, an audit deficiency will not result in misleading data being given to the public. It may be that total stockholder information falls a bit short of what it could be and that the audit fee is largely wasted, but these are minor compared to the potentially major costs that way arise if deficient audits coexist with managements who are trying to obscure the reality of their operation.

While an audit is normally a cooperative effort, perhaps 5% of the time adversary conditions arise. These are situations in which the interests of management and the public are diverse, where there are benefits to management from a process of reporting other than the full and fair results of operations. These are the tough audits, where the auditor more than earns his fee and has trouble collecting it. In these circumstances the auditor has the principal role of arbitration between the interests of management and the public, and in such cases he must always remember that he serves the public first. He must avoid the situation in which the public perceives it has been cheated as a consequence of deficient financial reporting because abuses of this sort carry a very high cost.

Economic Considerations

After considering the nature of the audit, we must next test its economic utility. In this connection the cost of audits of public companies in the United States is not difficult to measure. It has been estimated to be between $750 million and a billion dollars per annum. This is not a small figure and the question that must be answered is whether the value to society justifies the cost.

The benefits from audit services, however, are harder to quantify. As a starting point there are the benefits of improved financial information systems which result from the auditor's review and suggestions. For most companies the auditor also contributes to improved external financial reporting procedures and results; presumably he improves the communication process between management and investors. Finally, the auditor contributes significantly to the avoidance of abuse and, as previously indicated, the cost of abuse is very high. This service helps keep the company out of trouble, protects the board of directors, and builds the confidence of investors.

Confidence is a key to good markets. Analysts and other investors must be confident that the numbers on which they base their investment decisions are realistic within the framework of the accounting model or they will be reduced

to a feeling of being a part of a random process without knowing what is being done to them.

In the final analysis, the weighing of costs and benefits must represent a subjective judgment. The number of independent audits was growing prior to the Securities Acts and it can therefore be inferred that, at least for many companies, a hard-nosed market judgment justified the cost of an audit. I believe this case is stronger today than it was at that time, but since there is no definitive evidence or answer, one must have Faith—as I do.

Should There be Change?

If we agree that the principle of audits is a worthwhile one, we should explore next the question of whether or not things should be done differently. A number of suggestions have been made that perhaps there is a better alternative to the current approach of having independent accountants perform the audit function. Some have suggested that this should be a role for Government. Although in my current position I have developed a respect for the role of Government in the market place, I am not convinced this is the right answer. Government audits might be cheaper. I believe, however, that they would not be as creative, nor would they be as effective in avoiding abuses. A Government audit almost by its very nature is an adversary audit and the record of adversary audits in catching abuses is not very good. Such an audit discourages cooperation, which is still the key to most audits. While the auditors of the Internal Revenue Service, the Defense Contract Audit Agency, and the General Accounting Office achieve many successes, their overall record also shows the major difficulties which arise when the auditee is steadfastly trying to avoid working with the auditor. I believe, therefore, that Congress was wise in rejecting the idea of Government audits of companies offering their securities in the public market place.

Another possibility is to create an audit function within the corporation. The Audit Committee of the Board of Directors or some other internal source might supervise an internally performed function. I think, however, that it is apparent that not only would such auditors tend to lack breadth of expertise which comes to independent public accountants through experience with many companies, but this approach would also be defective in those cases where management had reason for advocacy—at the bottom 5% of the cases where the auditor is most tested. This leaves us then with independent accountants, who I think can justify the faith which has been placed in them.

If we mutually agree that things should not be done differently, we should then consider the question of who should select the auditor. There have been numerous suggestions that if an outside party such as the Securities and Exchange Commission or the New York Stock Exchange were to select auditors they would not be so dependent upon the economic market place, and would be able to be more independent and less subject to the pressures of management. Once again, however, we can get to the question of whether the cost in terms of lack of cooperation in such audits would be greater than the benefits created by the lack of relationship. I am not persuaded that the benefits of such a system outweigh the very substantial problems that coexist with it.

Finally, there are questions raised as to who should pay for audits. Many of those suggesting that auditors be appointed by outside agencies also suggest some pooling of resources to pay audit fees. They suggest a New York Stock Exchange fee or some other device by which a pool of funds will be generated. While this again has some appeal, since the economic relationship between the auditor and his clients is one of the principal problems of outward appearance that exists, I am doubtful that it would be an improvement. The discipline of the market place is still beneficial in the audit world, and an auditor who did not have a responsibility to his client to do a good job in economic terms might well tend to over-audit. We should not encourage a steady increase in procedures simply because money is available. While there are problems with the current fee arrangements, I think that they represent as good a solution as any that have currently been proposed.

Increasing Auditors' Rights

If we are to continue to operate within the current broad framework then we must determine what changes might be made to improve the quality of audit work and avoid perceived problems. In the first place, a number of things can be done to increase auditors' rights. While I would hesitate to suggest tenure, it would seem that a longer period of appointment might be beneficial. It is well known that during the first year of an audit, auditors generally absorb some significant nonrecurring costs. If the auditor could be assured of three, four or five years of audit relationships some economic pressures that might otherwise exist could be avoided.

Secondly, auditors should be given the right to attend meetings of the board of directors and stockholders of corporations. Corporate policy is set at directors' meetings and if the auditor is to be fully apprised of what is going on and if his services are to be most productively used, his attendance at such meetings would be beneficial. Stockholders' meetings are generally attended by auditors today and the availability of the auditor to answer stockholders' questions, as well as to make a statement if necessary, seems desirable.

Third, there should be increasing pressure for mandatory audit committees comprised of board members to whom the auditor will have a direct channel of communication. This is not only a protection to the board but also an important right for the auditor since he is able to deal with members of the board on a continuing institutionalized basis.

Fourth, it might be desirable to permit the auditor to communicate directly to the shareholders whenever he feels it is necessary for him to do so. While such communications would be infrequent, it seems an appropriate lightning rod and device by which auditors could encourage greater corporate disclosure when they felt it was necessary. Such a right might be implemented by a change in the SEC's proxy rules to require management to make a section in the proxy statement available to the auditor to enable him to make any statement to the stockholders which he feels necessary under the circumstances.

Finally, the auditor should have certain rights in regard to the disclosure of his dismissal. Our 8-K requirements currently represent a significant step forward in this regard, but it may be that they should be extended to require

disclosure in a proxy statement or annual report any time an auditor is changed. In addition, it might be that some public notice of auditor change should be required of any corporation beyond the simple 8-K requirement to report the hiring of a new auditor.

Some Accompanying Added Obligations

If auditors are to have more rights as I recommend, they should also recognize additional obligations. In this regard I believe that there is a need for increased use of the attest function. Auditors should be prepared, for example, to attest in some fashion to a company's internal control system and perhaps to forecasts or projections.

In addition, the concept of *auditor of public* record needs development. Under this concept, the auditor has a continuing responsibility to review all public communications to investors and shareholders on a timely basis—not with the objective of performing an audit on interim and other data but to provide assurance that audited financial results are not being misused in press releases and annual reports and to be certain that accounting and measurement problems have been adequately aired prior to the publication of interim reports and other announcements. It is apparent that substantial work must be done in the development of standards in this area but the concept seems to be one which is growing in acceptance.

Evolutionary, Not Revolutionary Change

In the final analysis then, this re-examination of the role of the auditor has not created a cry for revolutionary change. Rather, I believe that evolution of the auditor's role is essential and that the opportunities are very great for increased social service and function by the public accounting profession. Such increased opportunities should result both in increased revenues and increased responsibilities. As we see the tremendous growth in accounting enrollments in schools of business today, we can perhaps take pleasure in the fact that students are voting with their careers for a broader accounting function. If the profession avoids the paralysis which fear of liability can bring it and is prepared to see its role evolve, then both the public and the profession will be well served.