Evaluating the Sufficiency of Causes in Audit Analytical Procedures
Urton Anderson and Lisa Koonce

SUMMARY

When auditors perform analytical procedures, one concern is that they may render an incorrect conclusion about an observed fluctuation. In this paper, we argue that one way that auditors might make this kind of judgment mistake is to conclude that only one cause is responsible for an unexpected fluctuation when, in fact, multiple causes are responsible. We present a model of the evaluation of causes in analytical procedures that decomposes this task into two components—plausibility checking and sufficiency checking. We argue that auditors are more likely to make such judgment mistakes if they only perform the plausibility check.

To address this prediction, we conducted an experiment in the context of analytical procedures using 72 experienced auditors as subjects. Our experimental results show that, as predicted, auditors who merely perform a plausibility check are more likely to erroneously conclude that one cause is responsible for a fluctuation when, in fact, other causes are operating. In contrast, auditors who perform both plausibility and sufficiency checks are much better at discerning when there is one vs. multiple causes responsible for a fluctuation.

Key Words: Analytical procedures, Plausibility, Explanation, Sufficiency, Quantification.

Data Availability: Available from the authors upon request.
An Empirical Investigation of the Relationship Between the Computerization of Accounting Systems and the Incidence and Size of Audit Differences

Timothy B. Bell, W. Robert Knechel, Jeff L. Payne and John J. Willingham

SUMMARY

The decade of the 1980s saw a surge in research examining the empirical characteristics of audit differences detected in audit engagements. This paper examines the differential impact of computerization on common attributes of audit differences that have been studied in previous papers. Consistent with prior studies, the results of this study indicate that the majority of audit differences (misstatements) arise due to incorrect computations, differences in management and auditor judgment, faulty initial identification and processing of transactions, and overworked accounting personnel. Likewise, audit differences related to control attributes are usually associated with inadequately skilled personnel, improper or inadequate independent verifications, or improper documents and records; audit differences are rarely associated with inadequate controls over assets or records. This study reports additional findings that incorrect manual computations, the recording of exchange documents, incorrect application of internal controls, and inadequate internal controls are more likely to be sources of problems when information systems are computerized than when they are not. Finally, very few of the audit differences in this study were associated in any way with failures in the computerized system. This information should be useful for auditor planning in computerized environments and highlights the need to adequately consider the nature and reliability of such systems in the planning stages of an engagement.

Key Words: Audit planning, Audit difference, Fraud, Information technology.

Data Availability: Contact the authors concerning data availability.

Evidence on Auditor and Investor Materiality Thresholds Resulting From Equity-For-Debt Swaps

Eugene G. Chewning, Jr., Stephen W. Wheeler and Kam C. Chan

SUMMARY

Despite the user-oriented nature of the concept of materiality, little research addresses how financial statement users’ implied materiality judgments correspond with auditors’ implied materiality judgments. We descriptively investigate this issue using archival data from equity-for-debt swap transactions that occurred during the 1980s. The income statement classifications of gains that arose from swaps as either ordinary or extraordinary income were a function of the materiality of the gain. We document a positive association between firms’ income statement classifications of these gains and the strength of the capital market’s reaction to the announcement of the equity-for-debt swaps. Also, contrary to the evidence from other materiality studies employing archival research methods, our evidence indicates that the income statement classification of these gains, as ordinary or extraordinary income, follows closely a conventional percentage-of-income, materiality rule-of-thumb.

Key Words: Materiality, Equity-for-debt swaps, Extraordinary gains.

Data Availability: Data used in this study were collected from public sources identified in the manuscript. A list of sample firms and dates is available from the authors upon request.
Detecting and Estimating Misstatement in Two-Step Sequential Sampling with Probability Proportional to Size

Neal B. Hitzig

SUMMARY

This article presents an improved two-step sequential sampling procedure which facilitates efficient and effective auditing and accounting applications. The sampling objective is to obtain a reliable estimate whose precision is predetermined. This differs from a single sampling procedure, for which sample size is predetermined but precision is dependent on the observations.

This article corrects extant audit sampling literature, which treats sequential substantive procedures as though they are simply single samples with larger-than-originally-planned sample sizes. The literature fails to recognize that pooled estimates from sequential probability-proportional-to-size samples are biased and that pooled precision may not be as tight as planned.

A two-step sampling procedure is developed whose interval estimates are reliable for small samples and for infrequent occurrences of the characteristic of interest. Because the estimator is shown to be biased, a bias correction is developed.

The procedure is tested under a wide variety of conditions by enumeration of the sample space, which eliminates the sampling error associated with results of Monte Carlo simulations.

Key Words: Sequential sampling, Probability-proportional-to-size, Bias correction.

Data Availability: The software and data files are available from the author upon request.

Allocating Internal Audit Resources to Minimize Detection Risk Due to Theft

D. Paul Newman, Jaewan Park and J. Reed Smith

SUMMARY

We analyze internal audit resource allocation strategies and employee theft strategies in a setting in which there are many asset types or “locations” controlled by a single employee where theft can occur. The term “location” refers to an auditable group of assets of equal value and identical audit sampling cost for each unit in the group. Theft detection likelihoods are based on a discovery sampling formulation (the Poisson approximation to the binomial distribution) commonly used in theft and fraud scenarios; detection risk depends on the extent and allocation of auditing, the extent and allocation of theft, and the size of locations.

In our analysis, the auditor, by choice of a sampling strategy, minimizes detection risk, or equivalently maximizes the probability that theft is detected. The agent maximizes the expected net gain from undetected theft, where an increasing penalty is imposed on the agent as the amount of detected theft increases.

Using these behavioral assumptions, we find that the auditor’s strategy involves allocating to each location a share of the audit budget proportionate to the ratio of the cost of auditing the entire location to the cost of a complete (100 percent) audit of all locations. One implication of this result is that if the sampling cost at a location increases, then, contrary to an optimal allocation in a non-interactive setting,
the auditor allocates more resources to the more costly location. We also find that the agent’s theft strategy involves more theft from larger locations and from locations with higher audit costs.

**Key Words:** Strategic auditing, Auditing for theft, Audit allocations.