

Using Data Mining to Detect Fraud & Error

In today's complex environments fraud and error are buried in a myriad of transactions originating from numerous locations. This has made the traditional audit techniques of small random or statistical samples less effective at detecting fraud and error. Data mining techniques allow the auditor and finance professional to quickly analyze those numerous transactions to seek odd patterns in the data which can be targeted for further testing.

Participants will learn:

- ✓ What techniques have been used to successfully detect fraud and recover millions of dollars
- ✓ Why data mining techniques, when combined with traditional audit techniques such as observation and confirmation, result in the most powerful, most effective audits
- ✓ How to incorporate data mining techniques into their audit programs to detect the symptoms of fraud and error
- ✓ Why data mining techniques increase the efficiency and effectiveness of regular audits
- ✓ What symptoms of fraud look like in data mined results
- ✓ How to avoid common pitfalls in data mining
- ✓ How to handle the common objections related to data mining
- ✓ How to apply data mining to audits of several different financial statement and operational areas
- ✓ How to apply data mining to the five-step approach to fraud detection
- ✓ How to improve your sampling techniques with data mining
- ✓ Why data mining allows you to test one hundred percent of a population

All participants are eligible to receive up to 8 Continuing Education Credits (CPE's) to fulfill professional accreditation requirements. Field of Study: Auditing. Course Level: Basic. Group-live, lecture-style seminar; no prerequisites or advanced preparation required. For information regarding CPE, complaint, or program cancellation, please contact our office at 214-361-8346.



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Seminar Outline

The Basics of Data Mining

- What is data mining?
- Data mining and the five-step approach to fraud detection
- Common pitfalls in data mining
- Improving sampling with data mining
- Class Participant survey – Software & Practices

Fraudulent Financial Reporting

- Footing and using control totals to detect manipulation of reconciliation / adjustment spreadsheets
- Analyzing field statistics to detect unusual balances
- Extracting round sum entries and weekend transactions
- Searching for duplicate entries
- Testing transactions in accounts with unusual activity at the beginning or end of a fiscal period
- Seeking data fields that allow accountants to book one-sided entries

Accounts Payable, Procurement, and Expense Reports

- Analyzing payments within approved tolerances but above purchase order limits
- Extracting duplicate invoice payments
- Seeking circumvention of approval authority through invoice splitting and purchase requisition splitting
- Summarizing payments to determine the Top 10 vendors
- Analysis using Benford's Law
- Detecting false vendors
- Extracting after-the fact purchase orders
- Analyzing travel and entertainment expenses to detect duplicate expense

submissions as well as fraudulent airfare and miscellaneous expenses

Revenues and Receivables

- Detecting fraudulent revenues through analysis of delinquent receivables, credit memos, sales reversals, and write-offs
- Analyzing unusual revenue transactions booked at the end of a fiscal period
- Extracting receivables in which the customer's account exceeds their credit rating
- Summarizing changes to the customer or taxpayer master file

Payroll

- Recovering duplicate off-cycle payments
- Detecting overtime fraud and abuse
- Detecting ghost employees
- Extracting false social security numbers
- Extracting payments to terminated employees

Inventory and Fixed Assets

- Extracting negative inventory balances
- Analyzing credits of inventory with zero book value
- Testing inventory items that were scrapped or written off and then subsequently re-ordered
- Recalculating depreciation
- Seeking unusual patterns in write-offs

Miscellaneous Areas (addressed as time allows / based on participant interest)

- Cash
- Loans receivable
- Customer accounts
- Creating your own databases to support investigations
- Continuous monitoring