Contents

Case Studies xiii
Preface xv

CHAPTER 1 What Is Fraud? 1
Fraud: A Definition 3
Why Fraud Happens 4
Who Is Responsible for Fraud Detection? 7
What Is a Fraud Awareness Program? 11
Screening Job Applicants 12
What Is a Corporate Fraud Policy? 12
Notes 15

CHAPTER 2 Fraud Prevention and Detection 17
Detecting Fraud 18
Determining the Exposure to Fraud 19
Assessing the Risk that Fraud Is Occurring (or Will Occur) 23
External Symptoms 24
Identifying Areas of High Risk for Fraud 25
Looking at the Exposures from the Fraudster’s Perspective 26
Approach 1: Control Weaknesses 27
Who Could Benefit from the Identified Control Weaknesses? 27
What Can They Influence, Control, or Affect? 28
Can They Act Alone or Is Collusion Required? 29
Approach 2: Key Fields 30
Which Data Fields Can Be Manipulated and by Whom? 30
Contents

Additional Fraud Risk Considerations 31
Understanding the Symptoms of Fraud 31
Being Alert to the Symptoms of Fraud 34
Building Programs to Look for Symptoms 36
Investigating and Reporting Instances of Fraud 37
Implementing Controls for Fraud Prevention 38
Notes 39

CHAPTER 3
Why Use Data Analysis to Detect Fraud? 41
Increased Reliance on Computers 42
Developing CAATTs Capabilities 44
Integrated Analysis and Value-Added Audit 48
Recognizing Opportunities for CAATTs 49
Developing a Fraud Investigation Plan 49
Notes 54

CHAPTER 4
Solving the Data Problem 55
Setting Audit Objectives 55
Defining the Information Requirements 57
Accessing Data 58
Data Paths 59
Data File Attributes and Structures 61
Assessing Data Integrity 65
Overview of the Application System 68
Overview of the Data 69
Notes 70

CHAPTER 5
Understanding the Data 71
Computer Analysis 71
Analysis Techniques 74
Filter/Display Criteria 75
Expressions/Equations 75
Gaps 75
Statistical Analysis 76
Duplicates 76
Sort/Index 76
Summarization 77
Stratification 77
Cross Tabulation/Pivot Tables 78
Aging 78
<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Join/Relate</td>
</tr>
<tr>
<td>Trend Analysis</td>
</tr>
<tr>
<td>Regression Analysis</td>
</tr>
<tr>
<td>Parallel Simulation</td>
</tr>
<tr>
<td>Benford’s Law</td>
</tr>
<tr>
<td>Digital Analysis</td>
</tr>
<tr>
<td>Confirmation Letters</td>
</tr>
<tr>
<td>Sampling</td>
</tr>
<tr>
<td>Combining Techniques</td>
</tr>
<tr>
<td>Assessing the Completeness of the Data</td>
</tr>
<tr>
<td>Filter or Display Criteria</td>
</tr>
<tr>
<td>Expression/Equation</td>
</tr>
<tr>
<td>Gaps</td>
</tr>
<tr>
<td>Statistical Analysis</td>
</tr>
<tr>
<td>Duplicates</td>
</tr>
<tr>
<td>Sorting and Indexing</td>
</tr>
<tr>
<td>Notes</td>
</tr>
</tbody>
</table>

**CHAPTER 6**  
Overview of the Data | 111 |
---|---|
Summarization | 111 |
Stratification | 125 |
Cross Tabulation/Pivot Tables | 128 |

**CHAPTER 7**  
Working with the Data | 133 |
---|---|
Aging | 133 |
Join/Relation | 147 |

**CHAPTER 8**  
Analyzing Trends in the Data | 159 |
---|---|
Trend Analysis | 159 |
Regression Analysis | 165 |
Parallel Simulation | 168 |
Notes | 170 |

**CHAPTER 9**  
Known Symptoms of Fraud | 171 |
---|---|
Known and Unknown Symptoms | 172 |
Fraud in the Payroll Area | 173 |
Ghost Employees | 174 |
Terminated Employees | 177 |
Overpayment | 178 |
Fraud in the Purchasing Area
Employee Activities
Vendor Action and Employee Inaction
Collusion between Vendor and Employee
Symptoms of Purchasing Fraud
Kickbacks
Fixed Bidding
Goods Not Received
Duplicate Invoices
Inflated Prices
Inferior Quality
Excess Quantities

CHAPTER 10
Unknown Symptoms of Fraud
(Using Digital Analysis)
Data Profiling
Statistical Analysis
Stratification
Frequently Used Values
Even Amounts and Rounding
Least/Most Used Categories
Ratio/Variance Analysis
Maximum/Minimum
Maximum/Second Highest
Current/Previous
One Business Area/Another
Benford's Law
Notes

CHAPTER 11
Automating the Detection Process
Fraud Applications or Templates
Fraud Application Development

CHAPTER 12
Verifying the Results
Confirmation Letters
Sampling
Judgmental or Directed Sampling
Statistical Sampling
Quality Assurance
Quality Assurance Methodology
Contents

Preventive Controls 231
Detective Controls 232
Corrective Controls 232
Ensuring Reliability 233
Data Analysis and Prosecuting Fraud 233
Notes 238

APPENDIX A
Fraud Investigation Plans 239
Insurance Policies—Too Good to Be True 239
Paid by the Numbers 244

APPENDIX B
Application of CAATTs by Functional Area 249
Accounts Receivable Tests 250
Accounts Payable Tests 251
General Ledger Tests 253
Materials Management and Inventory Control Tests 253
Salary and Payroll Tests 256
Purchase Order Management Tests 257
Conflict-of-Interest Tests 257
Kickback Tests 258
Bid-Rigging Tests 258
Policy and Administration Tests 259
Vendor Management Tests 260
Retail Loss Prevention Tests 260
Sales Analysis Tests 261
Work in Progress Tests 262
Cash Disbursement Tests 263
Customer Service Management Tests 263
Loan Tests 264
Deposit Tests 264
Real Estate Loans 265
Credit Card Management 265
Life Insurance Tests 266
Travel Claims 266

APPENDIX C
ACL Installation Process 267

Epilogue 273
References 275
Index 277