Index

A
ACL Analytics (ACL Services Ltd), 6, 33–55
anomalies, 50–55
ad hoc, 52
fraud detection in financial crimes and banking, 52–53
six-step plan, 54–55
inventory fraud of operation supply and demand (case study), 35–50
analysis, 36–49
further analysis, 49–50
specifics, 36
techniques for fraud detection, 35
Actionable Intelligence Technology Financial Investigative Software (AITFIS), 8, 125, 130–134
case study, 132, 134–135
federal agencies using, 134
hierarchy/analytical chart, 133
AML Manager (Fiserv), 148
Anti-counterfeiting, challenge with, 93
Association of Certified Fraud Examiners (ACFE), 3–6, 50, 85, 141

Report to the Nations on Occupational Fraud and Abuse (2010), 51, 141
Report to the Nations on Occupational Fraud and Abuse (2012), 3–6
key findings and highlights of, 3–6

B
Bank fraud, challenge with, 95
case study, 97
Benford’s Law analysis, 41, 43–45, 83
graph, 84

C
CaseWare. See IDEA Data Analysis Software
Centrifuge Analytics, 91–105. See also Visual Network Analytics
anti-counterfeiting, challenge with, 93
bank fraud, challenge with, 95
case study, 97
fraud analysis, 95–100
advanced link analysis and identity visualization, 99–100
Centrifuge Analytics (Continued)
  data preparation and connectivity, 95, 98
  fraud management process, 100-105
  investigative analysis using data visualization, 102
  investigative analytics, 103-105
  interactive analytics, 93-95
  collaborative analysis, 95
  unified data views, 94
  visualization, 94
  link analysis, 92
Coderre, David, 57, 65
CRISP-DM, 59, 60-64
  vs. fraud data analysis, 66-68
D
Data Clarity, 145
Data mining, cross-industry standard process for (CRISP-DM 1.0), 59
Dee Consulting and Fraud Solutions Limited, 43, 46
F
FICO Insurance Manager 3.3, 145-146
Financial crimes and banking, fraud detection in, 52-53
  cash transactions, 53
  check tampering, 52
  corruption, 52-53
  financial skimming, 53
  financial statement fraud, 53
Fraud, schematics of, 1-14
  detection, 11-12
  fraud analytics
  defining, 2-6, 12
  in its new phase, 6-10
  refined, 12-13
  using, 10-11
Fraud analytics
  analytical process and, 23-32
  data analytics, 31-32
  designing, 29-31
  probabilities of fraud, 28-29
  steps in, 24-28
  strategies, 27-28
  defining, 2-6, 12
  evolution of, 15-22
  fraud prevention and detection in, 19-20
  incentives, pressures, and opportunities, 21
  strategies, 20
  using fraud analytics, reasons for, 17-19
  in its new phase, 6-10
  new trends in and tools, 137-149
  FICO Insurance Manager 3.3, 145-146
  Fiserv’s AML Manager, 148
  IBM i2 iBase, 146-147
  Palantir Tech, 147-148
  Raytheon’s VisuaLinks Analytics, 143-145
  vs. predictive analytics, 57-76
  comparing and contrasting predictive modeling and data analysis, 72-75
  composite methodology, 70-72
  conflicts within methodologies, 69-70
  CRISP-DM vs. fraud data analysis, 66-68
methodologies, comparing and contrasting, 60–64
overview, 58–60
SAS/SEMMA vs. fraud data analysis, 68–69
13 Step Score Development vs. fraud analytics, 64–66
refined, 12–13
using, 10–11

G
Garrett, Mollie, 140–141

I
i2 Analyst’s Notebook (IBM), 7, 107–125
and fraud analytics, 113–116
fraud and fraudsters, rapid investigation of, 108–109
highlights, 111–113
money-laundering scenario, using in, 121–125
case study 122–124
general process used in, 121
steps to perform, 121–122
using, 116–121
attribute types, 117–118
directional data, 118–119
list items, 119–121
i2 iBase (IBM), 146–147
IDEA Data Analysis Software (CaseWare), 6, 77–89
case study, 80–81
correlation, trend analysis, and time series analysis, 83
detecting fraud with, 79
fraud analysis points with, 82–83
purchase fraud of employee as vendor, 86–87
purpose, 83, 85–86
stages of using, 87–88
Interactive analytics, 93–95
collaborative analysis, 95
unified data views, 94
visualization, 94
Inventory fraud of operation supply and demand (case study), 35–50
analysis, 36–49
duplicate invoices, 37, 38, 39
even dollar amounts, 45–46
invalid product codes, 37–39, 40, 41
invoices billed on weekends, 39, 41, 43–44
quantity-on-hand vs. quantity-on-order analysis, 46–49
unavailable, backordered, or deleted product codes, 39
further analysis, 49–50
specifics, 36

L
Link analysis, 92

M
Millar, Peter, 331

N
Nigrini, Mark, 83

O
Occupational fraud, impact of, 3

P
Palantir Tech, 147–148
Peterson, Marilyn, 16
Predictive analytics, vs. fraud analytics, 57–76
comparing and contrasting predictive modeling and data analysis, 72–75
composite methodology, 70–72
CRISP-DM vs. fraud data analysis, 66–68
methodologies
comparing and contrasting, 60–64
conflicts within, 69–70
overview, 58–60
SAS/SEMMA vs. fraud data analysis, 68–69
13 Step Score Development vs. fraud analytics, 64–66
2012, 3–6
fraud detection, 3–4
impact of occupational fraud, 3
perpetrators of fraud, 5–6
victims of fraud, 4–5

\textbf{S}
SAS Analytics, 8, 127–130
large data volumes, 129–130
model development life cycle (with SEMMA), 60–64
SAS/SEMMA vs. fraud data analysis, 68–69
visualizing big data, 128–129
“South Sea Bubble” scandal, 2

\textbf{T}
13 Step Score Development vs. fraud analytics, 64–66

\textbf{V}
Visual Network Analytics (Centrifuge Systems), 7–8, 87
VisuaLinks (Raytheon), 7, 143–146