A One-Firm Firm:
Over 2,200 industry experts to partner with when specific industry knowledge is needed during investigations

Team Member’s Credentials Include
- Certified Public Accountant (CPA)
- Certified Fraud Examiner (CFE)
- Certified in Financial Forensics (CFF)
- Certified Management Accountant (CMA)
- Certified Internal Auditor (CIA)
Eric Conforti, CPA, CFE
248.223.3621
Eric.Conforti@PlanteMoran.com

Eric is a senior manager with our Forensic Accounting Services group, specializing in providing forensic investigations (the team conducts more than 100 each year), data analytics, and internal control analyses.

Professionally trained in a variety of interviewing and interrogation methods, he has identified millions in losses due to asset misappropriation across a variety of industries. Eric has helped organizations prepare economic loss claims that are filed with insurance companies and provided referrals to law enforcement at the federal, state, and local levels, resulting in dozens of criminal convictions.

Prior to joining this practice, Eric gained valuable experience serving as an auditor on Plante Moran’s governmental team.

Eric is a Certified Fraud Examiner and a Certified Public Accountant in the states of Ohio and Michigan. He is a member of the Association of Certified Fraud Examiners and the American Institute of Certified Public Accountants.
Case Study
Case Study – Check Tampering
What can you look for?

Internal Control Questions

• Who has access to check stock?

• Who has access to “auto-signatures” (e.g., printed with signatures, signature stamps, etc.)?

• Do you utilize use Positive Pay? Who uploads the bank file?
Case Study – Check Tampering

What can you look for?

Data Analytics

- Evaluate sequence of cleared check numbers.
- Search for duplicate check numbers.
- Search for multiple checks to the same vendor on the same day.
- Compare cancelled checks to check registers.
Recent Fraud Trends: ACFE Report to the Nations
Every two years the Association of Certified Fraud Examiners publishes a study on occupational fraud and abuse.

The report is available for free at www.acfe.com
## Recent Fraud Trends
### Summary of Trends

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Revenues lost to Fraud</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median Loss per Incident</td>
<td>$160,000</td>
<td>$140,000</td>
<td>$145,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Primary Factor of Loss</td>
<td></td>
<td></td>
<td>Lack of internal controls</td>
<td></td>
</tr>
<tr>
<td>Typical Scheme Time Duration</td>
<td></td>
<td></td>
<td>18 months</td>
<td></td>
</tr>
<tr>
<td>Clean Employment Histories</td>
<td>85%</td>
<td>87%</td>
<td>87%</td>
<td>95%</td>
</tr>
<tr>
<td>Typical Occurrences of Fraud</td>
<td></td>
<td></td>
<td>Asset misappropriation</td>
<td></td>
</tr>
<tr>
<td>Percentage of Asset Misappropriation</td>
<td>90%</td>
<td>87%</td>
<td>85%</td>
<td>83%</td>
</tr>
</tbody>
</table>
Recent Fraud Trends
The Typical Fraudster

- Median loss:
  - Male - $187,000
  - Female - $100,000 (previously $83,000)

- Between 35 and 41 years old
  - 55 percent

- Long-term employees = larger frauds

- May not take vacation/PTO
Recent Fraud Trends
Impact of Collusion

Figure 87: Number of Perpetrators—Frequency and Median Loss

<table>
<thead>
<tr>
<th>Number of Perpetrators</th>
<th>Median Loss</th>
<th>Percent of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>$85,000</td>
<td>52.9%</td>
</tr>
<tr>
<td>Two</td>
<td>$150,000</td>
<td>17.4%</td>
</tr>
<tr>
<td>Three</td>
<td>$220,000</td>
<td>10.6%</td>
</tr>
<tr>
<td>Four</td>
<td>$294,000</td>
<td>5.4%</td>
</tr>
<tr>
<td>Five or More</td>
<td>$633,000</td>
<td>13.7%</td>
</tr>
</tbody>
</table>
What was the most common behavioral red flag displayed by fraudsters?

A) Addiction Problems
B) Living Beyond Their Means/Financial Difficulties
C) Complained About Inadequate Pay
D) Marital Problems
Recent Fraud Trends
Behavioral Red Flags

Figure 94: Behavioral Red Flags Displayed by Perpetrators

- Living Beyond Means: 45.8%
- Financial Difficulties: 30.0%
- Unusually Close Association with Vendor/Customer: 25.8%
- Wheeler-Dealer Attitude: 20.1%
- Control Issues, Unwillingness to Share Duties: 17.7%
- Divorce/Family Problems: 15.3%
- Irritability, Suspiciousness, or Defensiveness: 12.3%
- Addiction Problems: 10.0%
- Complained About Inadequate Pay: 7.0%
- No Behavioral Red Flags: 7.0%
- Refusal to Take Vacations: 5.9%
- Excessive Pressure from Within Organization: 5.0%
- Past Employment-Related Problems: 4.8%
- Social Isolation: 5.7%
- Past Legal Problems: 4.6%
- Other: 4.5%
- Excessive Family/Peer Pressure for Success: 4.3%
- Complained About Lack of Authority: 4.3%
- Instability in Life Circumstances: 4.3%
Recent Fraud Trends
Occupational Fraud by Industry

Figure 43: Industry of Victim Organizations

Education

Banking and Financial Services 10.8%
Government and Public Administration 8.1%
Manufacturing 7.0%
Other 6.6%
Health Care

Oil and Gas 5.4%
Services (Other) 3.2%
Transportation and Warehousing 2.1%
Telecommunications 2.8%
Services (Professional) 2.7%
Religious, Charitable, or Social Services 2.4%
Agriculture, Forestry, Fishing, and Hunting 2.0%
Real Estate 1.9%
Utilities 1.8%
Arts, Entertainment, and Recreation 1.7%
Wholesale Trade 1.6%
Mining 0.9%
Communications and Publishing 0.7%

Percentage of Cases
## Recent Fraud Trends

### Size of Loss by Industry

#### Figure 44: Industry of Victim Organizations (Sorted by Median Loss)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number of Cases</th>
<th>Percent of Cases</th>
<th>Median Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>20</td>
<td>0.9%</td>
<td>$500,000</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>35</td>
<td>1.6%</td>
<td>$450,000</td>
</tr>
<tr>
<td>Services (Professional)</td>
<td>60</td>
<td>2.7%</td>
<td>$310,000</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing, and Hunting</td>
<td>44</td>
<td>2.0%</td>
<td>$300,000</td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>74</td>
<td>3.4%</td>
<td>$275,000</td>
</tr>
<tr>
<td>Construction</td>
<td>86</td>
<td>3.9%</td>
<td>$259,000</td>
</tr>
<tr>
<td>Technology</td>
<td>74</td>
<td>3.4%</td>
<td>$235,000</td>
</tr>
</tbody>
</table>

| Education                             | 132             | 6.0%             | $62,000     |

- Telecommunications: 62, 2.6%, $194,000
- Banking and Financial Services: 368, 16.8%, $192,000
- Transportation and Warehousing: 68, 3.1%, $143,000
- Government and Public Administration: 229, 10.5%, $133,000
- Health Care: 144, 6.6%, $120,000
- Insurance: 85, 3.9%, $107,000
- Utilities: 40, 1.8%, $102,000
- Other: 153, 7.0%, $100,000
- Services (Other): 70, 3.2%, $100,000
- Retail: 104, 4.8%, $85,000
- Religious, Charitable, or Social Services: 52, 2.4%, $82,000
- Arts, Entertainment, and Recreation: 37, 1.7%, $75,000
- Education: 132, 6.0%, $62,000
Recent Fraud Trends
Loss by Organization Size

Figure 41: Size of Victim Organization—Median Loss

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Median Loss 2016</th>
<th>Median Loss 2014</th>
<th>Median Loss 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100</td>
<td>$150,000</td>
<td>$154,000</td>
<td>$147,000</td>
</tr>
<tr>
<td>100–999</td>
<td>$128,000</td>
<td>$150,000</td>
<td>$186,000</td>
</tr>
<tr>
<td>1,000–9,999</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>10,000+</td>
<td>$140,000</td>
<td>$160,000</td>
<td>$150,000</td>
</tr>
</tbody>
</table>

Median Loss

19
### Recent Fraud Trends
**Fraud Schemes by Industry**

**Figure 45: Frequency of Schemes Based on Industry**

<table>
<thead>
<tr>
<th>Industry/Scheme</th>
<th>Banking and Financial Services</th>
<th>Government and Non-Profit Organizations</th>
<th>Manufacturing</th>
<th>Health Care</th>
<th>Education</th>
<th>Retail</th>
<th>Construction</th>
<th>Insurance</th>
<th>Oil and Gas</th>
<th>Technology</th>
<th>Transportation and Warehousing</th>
<th>Real Estate and Construction</th>
<th>Services (Other)</th>
<th>Religious, Charitable, or Social Services</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>368</td>
<td>220</td>
<td>192</td>
<td>144</td>
<td>132</td>
<td>104</td>
<td>86</td>
<td>74</td>
<td>74</td>
<td>70</td>
<td>66</td>
<td>62</td>
<td>60</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Billing</td>
<td>0.5%</td>
<td>25.3%</td>
<td>32.0%</td>
<td>31.2%</td>
<td>36.1%</td>
<td>15.4%</td>
<td>27.0%</td>
<td>17.6%</td>
<td>20.3%</td>
<td>23.7%</td>
<td>22.5%</td>
<td>22.1%</td>
<td>12.9%</td>
<td>26.7%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Cash Larceny</td>
<td>11.1%</td>
<td>7.9%</td>
<td>6.7%</td>
<td>13.4%</td>
<td>12.9%</td>
<td>29.3%</td>
<td>25.8%</td>
<td>17.0%</td>
<td>20.3%</td>
<td>23.7%</td>
<td>22.5%</td>
<td>22.1%</td>
<td>12.9%</td>
<td>26.7%</td>
<td>48.4%</td>
</tr>
<tr>
<td>Cash on Hand</td>
<td>17.9%</td>
<td>10.5%</td>
<td>8.2%</td>
<td>11.1%</td>
<td>17.4%</td>
<td>11.5%</td>
<td>7.0%</td>
<td>4.7%</td>
<td>9.5%</td>
<td>8.1%</td>
<td>22.9%</td>
<td>5.9%</td>
<td>4.8%</td>
<td>20.0%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Check Tampering</td>
<td>9.9%</td>
<td>9.2%</td>
<td>13.5%</td>
<td>14.6%</td>
<td>7.8%</td>
<td>9.6%</td>
<td>10.5%</td>
<td>17.4%</td>
<td>4.1%</td>
<td>5.4%</td>
<td>16.8%</td>
<td>10.3%</td>
<td>6.5%</td>
<td>31.7%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Corruption</td>
<td>37.5%</td>
<td>30.4%</td>
<td>30.6%</td>
<td>31.8%</td>
<td>32.7%</td>
<td>30.6%</td>
<td>30.6%</td>
<td>31.8%</td>
<td>32.7%</td>
<td>30.6%</td>
<td>30.6%</td>
<td>31.8%</td>
<td>32.7%</td>
<td>30.6%</td>
<td>31.8%</td>
</tr>
<tr>
<td>Expense Reimbursements</td>
<td>5.4%</td>
<td>15.7%</td>
<td>22.9%</td>
<td>20.1%</td>
<td>15.3%</td>
<td>8.7%</td>
<td>20.9%</td>
<td>9.4%</td>
<td>10.0%</td>
<td>27.0%</td>
<td>12.0%</td>
<td>6.8%</td>
<td>19.4%</td>
<td>16.7%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Financial Statement Fraud</td>
<td>12.9%</td>
<td>7.9%</td>
<td>10.9%</td>
<td>12.2%</td>
<td>5.2%</td>
<td>5.8%</td>
<td>17.4%</td>
<td>7.1%</td>
<td>6.8%</td>
<td>12.2%</td>
<td>17.1%</td>
<td>5.9%</td>
<td>9.7%</td>
<td>11.2%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Non-Cash</td>
<td>16.6%</td>
<td>14.8%</td>
<td>30.2%</td>
<td>12.5%</td>
<td>17.4%</td>
<td>22.7%</td>
<td>22.7%</td>
<td>12.5%</td>
<td>17.4%</td>
<td>18.9%</td>
<td>22.7%</td>
<td>20.4%</td>
<td>38.7%</td>
<td>10.0%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Payroll</td>
<td>3.8%</td>
<td>13.5%</td>
<td>11.5%</td>
<td>9.7%</td>
<td>7.8%</td>
<td>3.8%</td>
<td>16.3%</td>
<td>5.9%</td>
<td>8.1%</td>
<td>2.7%</td>
<td>11.4%</td>
<td>7.4%</td>
<td>3.2%</td>
<td>11.7%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Register Disbursements</td>
<td>2.7%</td>
<td>1.7%</td>
<td>5.7%</td>
<td>2.1%</td>
<td>2.1%</td>
<td>8.7%</td>
<td>12.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.6%</td>
<td>1.4%</td>
<td>5.7%</td>
<td>3.2%</td>
<td>2.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Skimming</td>
<td>6.8%</td>
<td>14.0%</td>
<td>8.3%</td>
<td>12.5%</td>
<td>25.0%</td>
<td>17.3%</td>
<td>15.1%</td>
<td>10.0%</td>
<td>8.1%</td>
<td>5.4%</td>
<td>21.4%</td>
<td>11.8%</td>
<td>6.5%</td>
<td>18.3%</td>
<td>15.2%</td>
</tr>
</tbody>
</table>

**Legend:**
- **Less Risk**
- **More Risk**
Recent Fraud Trends
Top Fraud Schemes - Education

Frequent Schemes in the Education Industry

1) Billing
2) Corruption
3) Skimming (although this is likely skewed by K-12)
4) Expense Reimbursement
Recent Fraud Trends
Top Fraud Schemes - Education

Most Common examples of Grant Fraud:

- Charging personal expenses as business expenses against the grant (Expense Reimbursement)
- Charging for costs which have not been incurred or are not attributable to the grant (Billing)
- Charging for inflated labor costs or hours, or categories of labor which have not been incurred (for example, fictitious employees, contractors or consultants) (Billing, Corruption)
- Billing more than one grant or contract for the same work (Billing, Expense Reimbursement)
- Influencing government employees to award a grant or contract to a particular company, family member, or friend (Corruption)
- Misrepresenting a project's status to continue receiving government funds (Corruption)
- Charging higher rates than those stated or negotiated for in the bid or contract (Billing, Corruption, Expense Reimbursement)
- Falsifying information in grant applications or contract proposals
- Falsifying test results or other data
- Substituting approved materials with unauthorized products

https://www.grants.gov/web/grants/learn-grants/grant-fraud/grant-fraud-responsibilities.html
Recent Fraud Trends
Primary Internal Control Weakness

Figure 63: Primary Internal Control Weakness Observed by CFE
Recent Fraud Trends
The Fraud Triangle

- **Opportunity**: Responsibility & Access Relationship & Trust
- **Motive**: Financial Difficulty, Illness & Addictions
- **Rationalization**: “I Deserve It” “I’ve Earned It”
Recent Fraud Trends

Figure 21: Initial Detection of Occupational Frauds

- Tip: 42.3% (2016), 63.3% (2014), 55.4% (2012)
- Internal Audit: 11.1% (2016), 10.4% (2014), 11.4% (2012)
- By Accident: 1.6% (2016), 1.8% (2014), 1.8% (2012)
- Account Reconciliation: 1.5% (2016), 1.5% (2014), 1.5% (2012)
- Other: 1.1% (2016), 1.1% (2014), 1.1% (2012)
- Document Examination: 1.2% (2016), 1.2% (2014), 1.2% (2012)
- External Audit: 1.0% (2016), 1.0% (2014), 1.0% (2012)
- Notified by Law Enforcement: 1.0% (2016), 1.0% (2014), 1.0% (2012)
- Surveillance/Monitoring: 1.0% (2016), 1.0% (2014), 1.0% (2012)
- IT Controls: 1.1% (2016), 1.1% (2014), 1.1% (2012)
- Confession: 1.0% (2016), 1.0% (2014), 1.0% (2012)
Recent Fraud Trends
Source of Tips

Figure 33: Source of Tips

- Employee: 51.5%
- Customer: 17.8%
- Anonymous: 14.0%
- Vendor: 9.9%
- Shareholder/Owner: 2.7%
- Competitor: 1.6%
- Other: 12.8%
Recent Fraud Trends
Discovery

What is the most effective method of reducing fraud loss?

A) Tip
B) Surveillance/Monitoring
C) External Audit
D) Account Reconciliation
Recent Fraud Trends

Discovery

Figure 32: Median Loss and Median Duration by Detection Method

- Active Detection Methods
- Potentially Active or Passive Detection Methods
- Passive Detection Methods

Median Loss and Median Duration by Detection Method:
- Surveillance/Monitoring
- IT Controls
- Account Reconciliation
- Internal Audit
- Confession
- Document Examination
- Tip
- Management Review
- External Audit
- By Accident
- Notified by Police
## Recent Fraud Trends

### Anti-Fraud Controls

**Figure 59: Median Loss Based on Presence of Anti-Fraud Controls**

<table>
<thead>
<tr>
<th>Control</th>
<th>Percent of Cases</th>
<th>Control in Place</th>
<th>Control Not in Place</th>
<th>Percent Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactive Data Monitoring/Analysis</td>
<td>36.7%</td>
<td>$92,000</td>
<td>$200,000</td>
<td>54.0%</td>
</tr>
<tr>
<td>Management Review</td>
<td>64.7%</td>
<td>$100,000</td>
<td>$200,000</td>
<td>50.0%</td>
</tr>
<tr>
<td>Hotline</td>
<td>60.1%</td>
<td>$100,000</td>
<td>$200,000</td>
<td>50.0%</td>
</tr>
<tr>
<td>Management Certification of Financial Statements</td>
<td>71.9%</td>
<td>$104,000</td>
<td>$205,000</td>
<td>49.3%</td>
</tr>
<tr>
<td>Surprise Audits</td>
<td>37.8%</td>
<td>$100,000</td>
<td>$195,000</td>
<td>48.7%</td>
</tr>
<tr>
<td>Dedicated Fraud Department, Function, or Team</td>
<td>41.2%</td>
<td>$100,000</td>
<td>$192,000</td>
<td>47.9%</td>
</tr>
<tr>
<td>Job Rotation/Mandatory Vacation</td>
<td>19.4%</td>
<td>$89,000</td>
<td>$170,000</td>
<td>47.6%</td>
</tr>
<tr>
<td>External Audit of Internal Controls over Financial Reporting</td>
<td>67.6%</td>
<td>$105,000</td>
<td>$200,000</td>
<td>47.5%</td>
</tr>
<tr>
<td>Fraud Training for Managers/Executives</td>
<td>51.3%</td>
<td>$100,000</td>
<td>$190,000</td>
<td>47.4%</td>
</tr>
<tr>
<td>Fraud Training for Employees</td>
<td>51.6%</td>
<td>$100,000</td>
<td>$188,000</td>
<td>46.8%</td>
</tr>
<tr>
<td>Formal Fraud Risk Assessments</td>
<td>39.3%</td>
<td>$100,000</td>
<td>$187,000</td>
<td>46.5%</td>
</tr>
<tr>
<td>Employee Support Programs</td>
<td>56.1%</td>
<td>$100,000</td>
<td>$183,000</td>
<td>45.4%</td>
</tr>
<tr>
<td>Anti-Fraud Policy</td>
<td>49.6%</td>
<td>$100,000</td>
<td>$175,000</td>
<td>42.5%</td>
</tr>
<tr>
<td>Internal Audit Department</td>
<td>73.7%</td>
<td>$123,000</td>
<td>$215,000</td>
<td>42.8%</td>
</tr>
<tr>
<td>Code of Conduct</td>
<td>81.1%</td>
<td>$120,000</td>
<td>$200,000</td>
<td>40.0%</td>
</tr>
<tr>
<td>Rewards for Whistleblowers</td>
<td>12.1%</td>
<td>$100,000</td>
<td>$163,000</td>
<td>38.7%</td>
</tr>
<tr>
<td>Independent Audit Committee</td>
<td>62.5%</td>
<td>$114,000</td>
<td>$180,000</td>
<td>36.7%</td>
</tr>
<tr>
<td>External Audit of Financial Statements</td>
<td>81.7%</td>
<td>$150,000</td>
<td>$175,000</td>
<td>14.3%</td>
</tr>
</tbody>
</table>
Billing
Billing Schemes

- Person causes employer, via submission of an invoice, to issue a payment for fictitious goods or services
  - Shell companies
  - Inflated invoices
  - Personal purchases
Billing Schemes - Concealment

- In 94.5% of the cases in our study, the perpetrator took some efforts to conceal the fraud.

- The most common concealment methods were creating and altering physical documents.
Case Study - Billing

What We Did

• Used risk-based scoring system to identify high-risk vendors
  ▪ Are there duplicate amounts paid to same vendor?
  ▪ Are payments large, rounded amounts?
  ▪ Analyzed invoices and contracts related to high risk vendors
Schemes
Top Fraud Schemes - Education

Billing Schemes

• Prevention Methods
  • Evaluate process to add new vendors—are duties segregated?
  • Is there a process in place to periodically review approved vendor list?

• Detection Methods – Analytics
  • Invoice numbers out of sequence
  • Inconsistent invoice numbers
  • Duplicate invoice numbers
  • Subtle changes in invoice numbers
Billing Scheme Invoice Analysis - What do you look for?

- Missing information:
  - Addresses
  - Invoice numbers
  - Logos
- Inconsistent information:
  - Fonts
  - Formats
  - Addresses
- What is the business purpose?
  - Ask ownership
- Confirm the legitimacy, not the existence
- Think outside the box!
Billing & Corruption
Corruption Schemes

- A vicious and fraudulent intention to use one’s position for personal benefit, contrary to the rights of others. Involves multiple parties.
  - Kickbacks
  - Conflicts of interest
  - Bribery
## Case Study - Billing and Corruption

### Types

<table>
<thead>
<tr>
<th>Communication</th>
<th>E-mail</th>
<th>337,195</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Email Message</td>
<td>299,963</td>
</tr>
<tr>
<td></td>
<td>Email Headers</td>
<td>24,069</td>
</tr>
<tr>
<td></td>
<td>Microsoft Outlook MSG File</td>
<td>15,548</td>
</tr>
<tr>
<td></td>
<td>Delivery Status Notification</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Microsoft Outlook .MPT Attachment File</td>
<td>4</td>
</tr>
<tr>
<td>Contacts</td>
<td>vCard File</td>
<td>12,109</td>
</tr>
<tr>
<td></td>
<td>vCard File</td>
<td>12,109</td>
</tr>
</tbody>
</table>

### User activity

| Scheduling       | 21,265 |
| Task             | 14 |
| WWW Internet Location (URL) | 13 |

### Documents

<table>
<thead>
<tr>
<th>Word processing</th>
<th>1,864</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDF Document</td>
<td>64,692</td>
</tr>
<tr>
<td>Microsoft Word Document</td>
<td>16,024</td>
</tr>
<tr>
<td>Rich Text Document</td>
<td>203</td>
</tr>
<tr>
<td>XPS Document</td>
<td>36</td>
</tr>
<tr>
<td>Microsoft Publisher Document</td>
<td>8</td>
</tr>
<tr>
<td>OpenDocument Text</td>
<td>1</td>
</tr>
<tr>
<td>Presentations</td>
<td>1,621</td>
</tr>
<tr>
<td>Microsoft PowerPoint Presentation</td>
<td>1,621</td>
</tr>
<tr>
<td>Spreadsheets</td>
<td>30,278</td>
</tr>
<tr>
<td>Microsoft Excel Workbook</td>
<td>20,277</td>
</tr>
<tr>
<td>OpenDocument Spreadsheet</td>
<td>1</td>
</tr>
<tr>
<td>Graphics</td>
<td>2,082</td>
</tr>
<tr>
<td>Adobe Photoshop Image</td>
<td>2,033</td>
</tr>
<tr>
<td>Microsoft Visio Diagram</td>
<td>46</td>
</tr>
<tr>
<td>AutoCAD DWG File</td>
<td>1</td>
</tr>
<tr>
<td>Other documents</td>
<td>7,806</td>
</tr>
<tr>
<td>HTML Document</td>
<td>9,207</td>
</tr>
<tr>
<td>Plain Text Document</td>
<td>1,281</td>
</tr>
</tbody>
</table>

### Media

<table>
<thead>
<tr>
<th>Images</th>
<th>1,497,059</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNG Image</td>
<td>916,169</td>
</tr>
<tr>
<td>JPEG Image</td>
<td>487,302</td>
</tr>
<tr>
<td>TIFF Image</td>
<td>472,968</td>
</tr>
<tr>
<td>GIF Image</td>
<td>6,423</td>
</tr>
<tr>
<td>BMP Image</td>
<td>5,988</td>
</tr>
<tr>
<td>BMP Image</td>
<td>4,442</td>
</tr>
<tr>
<td>BMP Image</td>
<td>3,788</td>
</tr>
</tbody>
</table>

### Time series: Eastern Standard Time

- Sent
- Resolved
- File Created
- File Last Modified
- File Last Accessed
- Content Created
- Content Last Modified
- Primary Date
- Family Date
- Last Printed
- Verdict
- Called
- Start Date
- Due Date

---

Case Study - Billing and Corruption

$8M+ in losses

Corruption can be **VERY difficult to detect** and even more difficult to prove, we needed to:

- Utilize our background research tools
- Perform social media research
- Perform an exhaustive review of email activity using key-word searches
- Even surveillance was performed to supplement our findings

However, a simple **“Google search”** by internal audit was all it took to start unraveling the scheme
Schemes
Top Fraud Schemes - Education

Corruption Schemes

• Prevention Methods
  • Difficult to prevent
  • Ensure segregation of duties are proper
  • Ethics policy and employee handbook

• Detection Methods – Analytics
  • Sparklines
Schemes
Top Fraud Schemes - Education

Kickbacks
Billing and Corruption
## Case Study – Billing & Corruption

<table>
<thead>
<tr>
<th>TRANS_DATE</th>
<th>INVOICE_DATE</th>
<th>INVOICE_AMOUNT</th>
<th>INVOICE_NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/16/2012</td>
<td>10/16/2012</td>
<td>7,500.00</td>
<td>10275</td>
</tr>
<tr>
<td>11/30/2012</td>
<td>11/30/2012</td>
<td>7,500.00</td>
<td>10275</td>
</tr>
<tr>
<td>12/12/2012</td>
<td>12/12/2012</td>
<td>40,000.00</td>
<td>10274</td>
</tr>
<tr>
<td>5/13/2013</td>
<td>5/13/2013</td>
<td>50,000.00</td>
<td>041913</td>
</tr>
<tr>
<td>5/13/2013</td>
<td>5/13/2013</td>
<td>85,000.00</td>
<td>0241914</td>
</tr>
<tr>
<td>5/29/2013</td>
<td>5/29/2013</td>
<td>30,000.00</td>
<td>0141913</td>
</tr>
<tr>
<td>6/18/2013</td>
<td>6/18/2013</td>
<td>20,000.00</td>
<td>061013</td>
</tr>
<tr>
<td>7/31/2013</td>
<td>7/31/2013</td>
<td>35,000.00</td>
<td>06282013</td>
</tr>
<tr>
<td>9/23/2013</td>
<td>9/23/2013</td>
<td>10,000.00</td>
<td>100</td>
</tr>
<tr>
<td>10/11/2013</td>
<td>10/11/2013</td>
<td>10,716.90</td>
<td>1011148</td>
</tr>
<tr>
<td>10/11/2013</td>
<td>10/11/2013</td>
<td>2,400.00</td>
<td>101113A</td>
</tr>
<tr>
<td>10/11/2013</td>
<td>10/11/2013</td>
<td>7,000.00</td>
<td>101115B</td>
</tr>
<tr>
<td>10/14/2013</td>
<td>10/14/2013</td>
<td>4,437.34</td>
<td>10145A</td>
</tr>
<tr>
<td>10/14/2013</td>
<td>10/14/2013</td>
<td>9,600.00</td>
<td>101413A</td>
</tr>
<tr>
<td>10/18/2013</td>
<td>10/18/2013</td>
<td>6,430.00</td>
<td>101416A</td>
</tr>
<tr>
<td>10/30/2013</td>
<td>11/1/2013</td>
<td>9,600.00</td>
<td>10148A</td>
</tr>
<tr>
<td>11/1/2013</td>
<td>11/1/2013</td>
<td>9,600.00</td>
<td>101418A</td>
</tr>
<tr>
<td>11/21/2013</td>
<td>11/21/2013</td>
<td>6,430.00</td>
<td>101420A</td>
</tr>
<tr>
<td>11/21/2013</td>
<td>11/21/2013</td>
<td>4,437.34</td>
<td>101419A</td>
</tr>
</tbody>
</table>
# Case Study – Billing & Corruption

<table>
<thead>
<tr>
<th>TRANS_DATE</th>
<th>INVOICE_DATE</th>
<th>INVOICE_AMOUNT</th>
<th>INVOICE_NUMBER</th>
<th>VENDOR_NUMBER</th>
<th>VENDOR_NAME</th>
<th>CHECK_NUMBER</th>
<th>CHECK_DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/30/2013</td>
<td>9/30/2013</td>
<td>6,000.00</td>
<td>100</td>
<td>13330</td>
<td>Consulting</td>
<td>A01365</td>
<td>10/29/2013</td>
</tr>
<tr>
<td>9/30/2013</td>
<td>9/30/2013</td>
<td>12,000.00</td>
<td>100</td>
<td>13330</td>
<td>Consulting</td>
<td>A01365</td>
<td>10/29/2013</td>
</tr>
<tr>
<td>11/12/2013</td>
<td>11/12/2013</td>
<td>10,000.00</td>
<td>3</td>
<td>13330</td>
<td>Consulting</td>
<td>A01584</td>
<td>12/16/2013</td>
</tr>
<tr>
<td>12/17/2013</td>
<td>12/17/2013</td>
<td>10,000.00</td>
<td>4</td>
<td>13330</td>
<td>Consulting</td>
<td>A01717</td>
<td>1/14/2014</td>
</tr>
<tr>
<td>2/3/2014</td>
<td>2/3/2014</td>
<td>6,000.00</td>
<td>5</td>
<td>13330</td>
<td>Consulting</td>
<td>A01857</td>
<td>2/10/2014</td>
</tr>
</tbody>
</table>
Billing and Corruption Takeaways

- Review payments below your threshold. Look for multiple payments to that vendor in order to circumvent you.
- Look at multiple invoices from the same vendor. Follow up on differences.
- Pay attention to the invoice numbers. Is your business office performing analytics?
- If you’re the only customer...you have fraud risk and operational risk.
- Ensure invoices have proper supporting backup.
Billing and Corruption
Common Format of Fictitious Invoices
Address Geocoding
Address Geocoding
Testing – Two Years Ago

Full Address

• 3671 E 131st street, Cleveland, OH 44144

Just Numbers

• 367113144144

3671 131 street, Cleveland, OH 44144
• 3671 E 131st St., Cleveland, OH, 44144
• 3671 East 131st Street, Cle, OH 44144
**Address Geocoding**

**What is geocoding?**

**Geocoding**: The process of transforming a postal address description to a location on the earth’s surface (spatial representation in numerical coordinates).

**Forensic Data Analytics**: Geocoding is a precise method for performing address matches (such as vendor-employee matches) or finding addresses within a close proximity.

https://en.wikipedia.org/wiki/Geocoding
Address Geocoding
Excel Fuzzy Lookup Match

• Add-in for Excel available on Microsoft’s website

• Useful for comparing data from two sources
  ▪ Address matching
  ▪ Name matching

• Simple to use
### Address Geocoding
### Excel Fuzzy Lookup Match Results

<table>
<thead>
<tr>
<th>Vendor Information</th>
<th>Employee Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>Kalamazoo Office</td>
<td>Kalamazoo Employee</td>
</tr>
<tr>
<td>Southfield Office</td>
<td>Southfield Employee</td>
</tr>
<tr>
<td>Cincinnati Office</td>
<td>Cincinnati Employee</td>
</tr>
<tr>
<td>Auburn Hills Office</td>
<td>Auburn Hills Employee</td>
</tr>
<tr>
<td>Columbus Office</td>
<td>Columbus Employee</td>
</tr>
<tr>
<td>Ann Arbor Office</td>
<td>Ann Arbor Employee</td>
</tr>
<tr>
<td>St. Joseph Office</td>
<td>St. Joseph Employee</td>
</tr>
<tr>
<td>Macomb Office</td>
<td>Macomb Employee</td>
</tr>
<tr>
<td>Traverse City Office</td>
<td>Traverse City Employee</td>
</tr>
</tbody>
</table>
Skimming Schemes

- Cash is stolen from an organization before it is recorded on the organization’s books and records
  - Accepts payment from a customer but does not record the sale and pockets the money
  - Employee records sale or donation for less than actual and pockets the difference
Top Fraud Schemes - Education

Skimming Schemes

- Prevention Methods
  - Mandatory Receipts
  - Security Cameras (working or non-working)
  - AR segregation of duties (counting cash, recording cash, depositing cash, handling complaints)

- Detection Methods – Analytics
  - Analyze “time gap” between transactions
  - Compare sales to reduction in actual inventory counts
  - False Discounts - Data analytics on use of employee discount, by id
  - Provide periodic statements to customers/donors and follow up on complaints
  - Pivot Tables
Skimming
Skimming Takeaways

- A skimming can be difficult to detect since it is an “off the books” scheme (e.g., cash is taken before it is recorded).

- **What can you do?**
  - Data analytics to identify unusual amounts.
  - Review sales discounts/write-offs for cash, sales and accounts receivable.
  - Video monitoring of areas where employees handle cash.
  - Follow-up on complaints or inquiries from customers.
  - Analyze relationship between sales, cost of sales, returns and allowances.
  - Segregation of duties.
Reimbursement Scheme
Expense Reimbursement Schemes

- Employee makes a claim for reimbursement of fictitious or inflated business expenses
  - Fraudulent expense report
  - Claims for personal travel
  - Non-existent meals
Expense Reimbursement Schemes

- Prevention Methods
  - Ensure duties are segregated for approval
  - Ensure reviewers would actually be knowledgeable on expenses
  - Only accept original itemized receipts

- Detection Methods – Analytics
  - Duplicate transactions (amount, location, date, people, etc.)
  - Transactions just under documentation threshold
Case Study – Reimbursement Scheme
What can you do?

**Testing**
- Are duties properly segregated?
- Who is reviewing/approving expenses?
  - Are they in a supervisor/subordinate relationship?
  - Would they be able to differentiate a legitimate expense from an improper expense?
- **Pay attention to statement balances**, not just individual transactions.

**Data Analytics Testing**
- Search for duplicate transactions (amount, location, date, people, etc.).
- Search for transactions just below documentation requirement threshold.
Reimbursement Scheme - Credit Card
**Takeaways:**

- Think about how you can use the information available when you are missing the “ideal” information.

- You may not be able to see the answer using only one source of data; use multiple sources of information to piece together the puzzle.
Stolen Phones
Case Study – Stolen Phones

The Situation
• The entity provides cell phones to employees.
• Phones are replaced every two years.
• Office Manager is responsible for distributing new phones and collecting used phones.

Red Flags
• Office Manager is the only employee that has online access to account.
• Detailed account statements are not provided to any other employees.
• No records kept to track issue/collection of new/used phones.
Takeaways

• Things to consider when conducting an internal investigation:
  
  ▪ Identify **additional areas** at risk based on the perpetrator’s job duties;
  
  ▪ Validate **accuracy** with an independent mindset; and
  
  ▪ Ensure you have the **right team** conducting the investigation.
Back to the Basics: The Bank Statements
Case Study – Bank Statements

The situation:

- Allegations that the CFO was embezzling
- Analyzed the bank statements to identify unusual outflows of cash
Takeaways

• In theory, activity received and disbursed should be “visible” within the bank statements

• Bank statements should be mailed directly to someone who is not involved in the cash disbursement and/or receiving process

• Multiple sections provide useful information
  ▪ Cleared check numbers
  ▪ ATM or direct cash withdrawals
  ▪ Electronic payments
Questions?
Eric Conforti, CPA, CFE
248.223.3621
Eric.Conforti@PlanteMoran.com