Who Are We?
Case Study - Check Tampering
Case study information redacted
Case Study - Check Tampering
What can you look for?

**Preventative Measures**
- Who has access to check stock?
- Who has access to “auto-signatures”? (e.g., printed with signatures, signature stamps, etc.)
- Does the client use Positive Pay?

**Detective Measures (Data Analytics)**
- Evaluate sequence of cleared check numbers
- Compare cancelled checks to check registers
- Search for duplicate check numbers
- Search for multiple checks to the same vendor on the same day
Recent Fraud Trends
ACFE Report to the Nations
Recent Fraud Trends

REPORT TO THE NATIONS
2018 GLOBAL STUDY ON OCCUPATIONAL FRAUD AND ABUSE

2,690 real cases of occupational fraud from 125 countries in 23 industry categories

$7 BILLION+ IN TOTAL LOSSES
$130,000 MEDIAN LOSS PER CASE
22% OF CASES CAUSED LOSSES OF $1 MILLION+
## Recent Fraud Trends

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2012</th>
<th>2014</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Revenues lost to Fraud</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td><strong>Median Loss per Incident</strong></td>
<td>$160,000</td>
<td>$140,000</td>
<td>$145,000</td>
<td>$150,000</td>
<td>$130,000</td>
</tr>
<tr>
<td><strong>Primary Factor of Loss</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lack of internal controls</td>
</tr>
<tr>
<td><strong>Typical Scheme Time Duration</strong></td>
<td></td>
<td></td>
<td>18 months</td>
<td></td>
<td>16 months</td>
</tr>
<tr>
<td><strong>Clean Employment Histories</strong></td>
<td>85%</td>
<td>87%</td>
<td>87%</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td><strong>Typical Occurrences of Fraud</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Asset misappropriation</td>
</tr>
<tr>
<td><strong>Percentage of Asset Misappropriation</strong></td>
<td>90%</td>
<td>87%</td>
<td>85%</td>
<td>83%</td>
<td>89%</td>
</tr>
</tbody>
</table>
Recent Fraud Trends
Top Industries by Number of Cases

- Banking and financial services: 366 cases, median loss: $110,000
- Manufacturing: 212 cases, median loss: $240,000
- Government and public administration: 201 cases, median loss: $125,000
- Health care: 158 cases, median loss: $100,000
- Retail: 108 cases, median loss: $50,000
- Insurance: 101 cases, median loss: $153,000
- Education: 97 cases, median loss: $68,000
- Energy: 94 cases, median loss: $300,000
- Construction: 90 cases, median loss: $227,000
- Other: 84 cases, median loss: $70,000
## Recent Fraud Trends

### The Perpetrator

<table>
<thead>
<tr>
<th>GENDER</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Loss</td>
<td>$156,000</td>
<td>$89,000</td>
</tr>
<tr>
<td>Percentage</td>
<td>58%</td>
<td>42%</td>
</tr>
</tbody>
</table>

### AGE
53% of perpetrators are between 31 to 45 years old

### DEPARTMENT
1. Accounting (14%)
2. Operations (14%)
3. Sales (12%)

### POSITION
1. Employee (44%)
2. Manager (34%)
3. Owner (19%)
<table>
<thead>
<tr>
<th>Behavioral Red Flags</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living beyond means</td>
<td>41%</td>
</tr>
<tr>
<td>Financial difficulties</td>
<td>29%</td>
</tr>
<tr>
<td>Unusually close association with vendor/customer</td>
<td>20%</td>
</tr>
<tr>
<td>No behavioral red flags</td>
<td>15%</td>
</tr>
<tr>
<td>Control issues, unwillingness to share duties</td>
<td>15%</td>
</tr>
<tr>
<td>Divorce/family problems</td>
<td>14%</td>
</tr>
<tr>
<td>“Wheeler-dealer” attitude</td>
<td>13%</td>
</tr>
<tr>
<td>Irritability, suspiciousness, or defensiveness</td>
<td>12%</td>
</tr>
<tr>
<td>Addiction problems</td>
<td>10%</td>
</tr>
<tr>
<td>Complained about inadequate pay</td>
<td>9%</td>
</tr>
<tr>
<td>Excessive pressure from within organization</td>
<td>7%</td>
</tr>
<tr>
<td>Social isolation</td>
<td>7%</td>
</tr>
<tr>
<td>Past legal problems</td>
<td>6%</td>
</tr>
<tr>
<td>Refusal to take vacations</td>
<td>6%</td>
</tr>
<tr>
<td>Past employment-related problems</td>
<td>6%</td>
</tr>
<tr>
<td>Complained about lack of authority</td>
<td>5%</td>
</tr>
<tr>
<td>Excessive family/peer pressure for success</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
<tr>
<td>Instability in life circumstances</td>
<td>3%</td>
</tr>
</tbody>
</table>
Recent Fraud Trends
The Importance of Controls

**INTERNAL CONTROL WEAKNESSES**
were responsible for nearly half of frauds

**ALL 18 ANTI-FRAUD CONTROLS**
analyzed were associated with **lower fraud losses**
and **quicker detection**
How does the number of perpetrators relate to median loss?
What are the most common occupational fraud schemes in various industries?

<table>
<thead>
<tr>
<th>Industry</th>
<th>Cases</th>
<th>Billing</th>
<th>Cash fraud</th>
<th>Credit and payment fraud</th>
<th>Corruption</th>
<th>Expense reimbursements</th>
<th>Financial statement fraud</th>
<th>Money</th>
<th>Payroll</th>
<th>Other disbursements</th>
<th>Stolen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking and financial services</td>
<td>338</td>
<td>11%</td>
<td>14%</td>
<td>23%</td>
<td>12%</td>
<td>36%</td>
<td>7%</td>
<td>8%</td>
<td>11%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>201</td>
<td>27%</td>
<td>8%</td>
<td>15%</td>
<td>12%</td>
<td>51%</td>
<td>18%</td>
<td>10%</td>
<td>23%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Government and public administration</td>
<td>184</td>
<td>15%</td>
<td>11%</td>
<td>11%</td>
<td>9%</td>
<td>50%</td>
<td>11%</td>
<td>5%</td>
<td>22%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Health care</td>
<td>149</td>
<td>26%</td>
<td>7%</td>
<td>13%</td>
<td>13%</td>
<td>36%</td>
<td>16%</td>
<td>11%</td>
<td>19%</td>
<td>17%</td>
<td>1%</td>
</tr>
<tr>
<td>Retail</td>
<td>104</td>
<td>20%</td>
<td>10%</td>
<td>15%</td>
<td>9%</td>
<td>28%</td>
<td>8%</td>
<td>12%</td>
<td>34%</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>Education</td>
<td>96</td>
<td>23%</td>
<td>19%</td>
<td>15%</td>
<td>6%</td>
<td>38%</td>
<td>18%</td>
<td>6%</td>
<td>19%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Insurance</td>
<td>87</td>
<td>20%</td>
<td>9%</td>
<td>3%</td>
<td>18%</td>
<td>45%</td>
<td>8%</td>
<td>7%</td>
<td>11%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Energy</td>
<td>86</td>
<td>20%</td>
<td>2%</td>
<td>10%</td>
<td>12%</td>
<td>53%</td>
<td>10%</td>
<td>3%</td>
<td>27%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Construction</td>
<td>83</td>
<td>27%</td>
<td>12%</td>
<td>8%</td>
<td>19%</td>
<td>42%</td>
<td>23%</td>
<td>16%</td>
<td>23%</td>
<td>14%</td>
<td>1%</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>79</td>
<td>25%</td>
<td>8%</td>
<td>8%</td>
<td>9%</td>
<td>46%</td>
<td>15%</td>
<td>8%</td>
<td>28%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Food service and hospitality</td>
<td>75</td>
<td>17%</td>
<td>16%</td>
<td>20%</td>
<td>11%</td>
<td>29%</td>
<td>12%</td>
<td>12%</td>
<td>24%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>Technology</td>
<td>62</td>
<td>26%</td>
<td>5%</td>
<td>10%</td>
<td>8%</td>
<td>42%</td>
<td>21%</td>
<td>16%</td>
<td>32%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Religious, charitable, or social services</td>
<td>58</td>
<td>40%</td>
<td>9%</td>
<td>22%</td>
<td>19%</td>
<td>34%</td>
<td>29%</td>
<td>10%</td>
<td>19%</td>
<td>22%</td>
<td>3%</td>
</tr>
<tr>
<td>Services (professional)</td>
<td>54</td>
<td>26%</td>
<td>17%</td>
<td>15%</td>
<td>26%</td>
<td>17%</td>
<td>30%</td>
<td>13%</td>
<td>13%</td>
<td>15%</td>
<td>0%</td>
</tr>
<tr>
<td>Arts, entertainment, and recreation</td>
<td>50</td>
<td>14%</td>
<td>20%</td>
<td>36%</td>
<td>6%</td>
<td>32%</td>
<td>12%</td>
<td>8%</td>
<td>18%</td>
<td>4%</td>
<td>8%</td>
</tr>
</tbody>
</table>
What are the most common occupational fraud schemes in various industries?

![Image showing the most common occupational fraud schemes in various industries with Education industry highlighted.](image-url)
Recent Fraud Trends
The Most Common Schemes

- Corruption
- Billing
- Expense Reimbursement
- Skimming (Cash)
Case Study - Billing & Corruption
Case study information redacted
Case Study – Billing & Corruption

• 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

• Follow-up if you see something that doesn’t make sense. Identifying that the quote from one vendor to another vendor seemed unusual and digging in further was key to piecing together the mark-up scheme
Case Study – Billing & Corruption

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!
Case Study Takeaways

• Review payments just below the approval thresholds.

• Review multiple invoices from the same vendor. Follow up on differences.

• If you’re the only customer, you may be exposed to fraud risk and/or operational risk.

• Ensure invoices have proper supporting backup.

• Pay attention to the invoice numbers. Is your company performing analytics?
Case Study - Reimbursement Scheme
Case study information redacted
Preventative Measures

- Properly segregate duties
- Ensure reviewing/approving expenses process is appropriate
  - Subordinate should not be reviewing supervisor’s expenses
  - Reviewer can differentiate a legitimate expense from an improper expense
  - Reviewers should ensure expenses are in compliance with policies

Detective Measures (Data Analytics Testing)

- Duplicate transactions (amount, location, date, people, etc.)
- Transactions just below documentation requirement threshold
Anti-Fraud Controls
Anti-Fraud Controls
Professional Skepticism

Only 3% of cases did not involve any attempts to conceal the fraud.

All of these unconcealed cases were committed by owners/executives.

Top 8 concealment methods used by fraudsters:
- Created fraudulent physical documents: 55%
- Altered physical documents: 48%
- Created fraudulent transactions in the accounting system: 42%
- Altered transactions in the accounting system: 34%
- Altered electronic documents or files: 31%
- Destroyed physical documents: 30%
- Created fraudulent electronic documents or files: 29%
- Created fraudulent journal entries: 27%

What to conceal: physical or electronic evidence?
- Electronic evidence: 63%
- Physical evidence: 21%
- Both: 12%
What were the most effective anti-fraud controls?

DATA MONITORING/ANALYSIS and SURPRISE AUDITS were correlated with the largest reductions in fraud loss and duration.

- **Data monitoring/analysis**: 52% lowering losses, 58% faster detection
- **Surprise audits**: 51% lowering losses, 54% faster detection

Yet only 37% of victim organizations implemented these controls.
Conditional Formatting

- Highlight your data
  - One column at a time

- Go to Conditional Formatting > Highlight Cells Rules > Duplicate Values
Conditional Formatting

Duplicates are now highlighted in red.

Sort your data by color.
Anti-Fraud Controls  
Data Analytics - Duplicates

**Conditional Formatting**

- Manual review
- More highlights = more risk

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
<th>Place</th>
<th>Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/03/15</td>
<td>30.00</td>
<td>Hardware Store 5</td>
<td>Jake Jones</td>
</tr>
<tr>
<td>09/04/15</td>
<td>40.00</td>
<td>Hardware Store 4</td>
<td>Jake Jones</td>
</tr>
<tr>
<td>09/07/15</td>
<td>70.00</td>
<td>Hardware Store 7</td>
<td>John Smith</td>
</tr>
<tr>
<td>09/08/15</td>
<td>80.00</td>
<td>Hardware Store 8</td>
<td>John Smith</td>
</tr>
<tr>
<td>09/10/15</td>
<td>100.00</td>
<td>Hardware Store 3</td>
<td>John Smith</td>
</tr>
<tr>
<td>09/12/15</td>
<td>120.00</td>
<td>Hardware Store 11</td>
<td>John Smith</td>
</tr>
<tr>
<td>09/02/15</td>
<td>20.00</td>
<td>Hardware Store 2</td>
<td>Linda Johnson</td>
</tr>
<tr>
<td>09/11/15</td>
<td>110.00</td>
<td>Hardware Store 10</td>
<td>Jake Jones</td>
</tr>
<tr>
<td>09/13/15</td>
<td>130.00</td>
<td>Hardware Store 10</td>
<td>Jake Jones</td>
</tr>
<tr>
<td>09/14/15</td>
<td>140.00</td>
<td>Hardware Store 10</td>
<td>Jake Jones</td>
</tr>
<tr>
<td>09/01/15</td>
<td>10.00</td>
<td>Hardware Store 1</td>
<td>John Smith</td>
</tr>
<tr>
<td>09/15/15</td>
<td>149.00</td>
<td>Hardware Store 9</td>
<td>John Smith</td>
</tr>
<tr>
<td>09/15/15</td>
<td>150.00</td>
<td>Hardware Store 9</td>
<td>Linda Johnson</td>
</tr>
<tr>
<td>09/05/15</td>
<td>50.00</td>
<td>Hardware Store 1</td>
<td>Linda Johnson</td>
</tr>
<tr>
<td>09/05/15</td>
<td>50.00</td>
<td>Hardware Store 1</td>
<td>Linda Johnson</td>
</tr>
</tbody>
</table>
Anti-Fraud Controls
Address Matching - 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
### Anti-Fraud Controls
#### Address Matching - Excel Fuzzy Lookup Match

<table>
<thead>
<tr>
<th>Vendor Information</th>
<th>Employee Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td><strong>Address</strong></td>
</tr>
<tr>
<td>Kalamazoo Office</td>
<td>750 Trade Centre Way Kalamazoo, MI 49002</td>
</tr>
<tr>
<td>Southfield Office</td>
<td>27400 Northwestern Highway Southfield, MI 48034</td>
</tr>
<tr>
<td>Cincinnati Office</td>
<td>537 E. Pete Rose Way Cincinnati, OH 45202</td>
</tr>
<tr>
<td>Auburn Hills Office</td>
<td>2601 Cambridge Court Suite 500 Auburn Hills, MI 48326</td>
</tr>
<tr>
<td>Columbus Office</td>
<td>250 S. High Street Suite 100 Columbus, OH 43215</td>
</tr>
<tr>
<td>Ann Arbor Office</td>
<td>1000 Oakbrook Dr. Suite 400 Ann Arbor, MI 48104</td>
</tr>
<tr>
<td>St. Joseph Office</td>
<td>511 Renaissance Drive Suite 120 St. Joseph, MI 49085</td>
</tr>
<tr>
<td>Macomb Office</td>
<td>19176 Hall Road Suite 300 Clinton Township, MI 48038</td>
</tr>
<tr>
<td>Traverse City Office</td>
<td>600 E. Front Street Suite 300 Traverse City, MI 49686</td>
</tr>
</tbody>
</table>
Anti-Fraud Controls
What Are the Key Risks (Authority vs. Ability)?

**Authority**
• Written internal policy governing who can do transactions on behalf of the Organization

**Ability**
• Ignoring “authority” does the person have the access and ability to circumvent the internal control structure?
Anti-Fraud Controls
What Are the Key Risks (Authority vs. Ability)?

Authority vs. Ability - Example

• The Associate Superintendent of Finance (ASF) and Controller at our client were check signers on the bank account and investment account. The client has a policy that requires two approvals or signatures for disbursements over $1,000 before they take place. The form lists spots for two signatures and requires a purpose be identified. Once signed, the forms are kept in a file cabinet for reference.

• Authority – The ASF and Controller, on their own, do not have the authority to spend over $1,000 on behalf of the client.

• Ability – The ASF and Controller, on their own, have the ability to spend over $1,000 on behalf of the client without a second individual knowing about it.
Case Study – Skimming (Cash)
Case Study – Skimming (Cash)

Skimming Schemes

- Cash is removed from an entity before it enters the accounting system
  - Sales
    - Unrecorded sales
    - Understated sales
  - Accounts receivable
    - Write-off
    - Lapping
  - Refund and other schemes
Case study information redacted
Case Study – Skimming (Cash)

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

- **What else can you do?**
  - Data analytics to identify unusual amounts
  - Video monitoring of areas where employees handle cash
  - Follow-up on complaints or inquiries from customers
  - Segregation of duties
Case study information redacted
Case Study – Skimming (Cash)

- Policies and controls are only effective if they are implemented and enforced

- Individuals should confirm the information on the document makes sense prior to signing for approval
Payroll Schemes
Payroll Schemes

• Any scheme in which an employee causes their employer to issue a payment by making false claims for compensation
  
  • Claim overtime for hours not worked
  
  • Ghost employees
  
  • Vacation days taken without reducing their balance
Payroll Schemes

• Prevention Methods
  • Review procedures for how payroll changes are made
    • Are duties segregated?
    • Are the check runs reviewed once complete for reasonableness?
    • Change reports?
  • How are checks signed? (Stamp? Electronic? Where is check stock stored?)
  • Are hours approved by Supervisors

• Detection Methods
  • Checks cut on non-payroll days
  • One time payments larger than salary amounts
  • Employees with P.O. Box or out of state addresses
Sparklines – Payroll

- Microsoft Definition – “a tiny chart in a worksheet cell...to show trends in a series of values, such as seasonal increases or decreases, economic cycles, or to highlight maximum and minimum values.”

- Trended in relation to itself

- You can utilize Sparklines within Excel to quickly test for:
  - Larger than normal checks
  - Checks on non-payroll days

- A basic knowledge of pivot tables is required to format from a list set of data

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Count</th>
<th>Amount</th>
<th>Sparkline</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIG BOX STORE</td>
<td>333</td>
<td>$ 35,296.71</td>
<td></td>
</tr>
<tr>
<td>CELL PHONE CO</td>
<td>226</td>
<td>$ 162,196.52</td>
<td></td>
</tr>
<tr>
<td>EMPLOYEE</td>
<td>75</td>
<td>$ 57,572.32</td>
<td></td>
</tr>
<tr>
<td>HARDWARE STORE</td>
<td>370</td>
<td>$ 15,540.12</td>
<td></td>
</tr>
<tr>
<td>LAWYERS INC</td>
<td>209</td>
<td>$ 85,122.64</td>
<td></td>
</tr>
<tr>
<td>MUSIC CO</td>
<td>190</td>
<td>$ 41,525.67</td>
<td></td>
</tr>
<tr>
<td>OFFICE SUPPLY</td>
<td>460</td>
<td>$ 154,609.61</td>
<td></td>
</tr>
<tr>
<td>TRANSPORTATION CO</td>
<td>244</td>
<td>$ 60,777.33</td>
<td></td>
</tr>
<tr>
<td>UNIFORM RENTAL</td>
<td>395</td>
<td>$ 14,403.90</td>
<td></td>
</tr>
</tbody>
</table>
Remember...

Trust is not an internal control...

Trust, but verify.