

Best Audit Practice Contest Submission – EAR Analysis

Background Information

Like many other credit unions, we review employee-related activity for fraud and misconduct, including but not limited to the following areas:

- Expense reports
- File maintenance (e.g., interest rate and due date changes on loans, system overrides, removal of a warning flag, etc.)
- Corporate credit card transactions
- Employee loans
- Cash over and short reports
- Non-sufficient funds and overdraft program items
- Wire transfers

Each year, our examiners inquire about our reviews of employee-related activity, including if we review employee accounts. With more than 400 employees, it is neither practical nor cost effective to review employee accounts without any substantive basis. Additionally, based on a search of the ACUIA's user forum, most credit union internal auditors find little value in reviewing employee accounts.

According to the 2016 ACFE Report to the Nations on Occupational Fraud and Abuse, the six most common behavioral red flags were: (1) living beyond means; (2) financial difficulties; (3) unusually close association with a vendor or customer; (4) a general "wheeler-dealer" attitude involving shrewd or unscrupulous behavior; (5) excessive control issues or unwillingness to share duties; and (6) recent divorce or family problems.

Summary of Audit Practice

We developed a scoring model, called the Employee Account Review (EAR) Analysis, within Excel to assess an employee's fraud risk potential using quantifiable inputs. Moreover, we considered the ACFE's top two behavioral red flags – living beyond means and financial difficulties – in developing our factors. Each factor is given a score to weigh its level of risk. The factors are grouped accordingly below:

- Credit-related
 - Credit score below "x"
 - Credit score decreased by several points
 - Credit card balance increased substantially
 - Credit card limit utilization
 - Total loan balance increased substantially
- Savings-related
 - Total share balances decreased substantially
 - Frequency of non-sufficient funds (NSF) and overdraft protection (ODP) use

- Position-related
 - Cash handling/member service role (i.e., misappropriation & transaction risk)
 - Senior management level (i.e., override of controls risk)
 - Accounting department (i.e., transaction risk)
 - Human resources department (i.e., payroll risk)
- Minor factors noted by the 2016 ACFE Report to the Nations
 - Age (i.e., range of 31 - 50 years old shows higher frequency of fraud)
 - Gender (i.e., males show higher frequency of fraud)
 - Length of service (i.e., those employed by the institution more than six years show a higher median loss of fraud)

Like any reporting system, in order to extract meaningful data, it is necessary to capture key inputs. Data from three sources is copied into the EAR Analysis. The main table has a series of formulas and VLOOKUPs to pull in and compare current and prior period data, employee listing information, and scoring model inputs. Data from the main table then flows into the “Dashboard” worksheet via PivotTables.

The EAR Analysis has advanced functionality, including:

- Pivot Tables, one of which pivots off of a slicer
- Protected worksheet functionality that locks down the “Dashboard” worksheet from unauthorized changes that could negatively affect the functionality of the “Dashboard”
- Two ways to automatically refresh the “Dashboard” worksheet
 - Reopening the workbook
 - Navigating from the data input worksheets to the “Dashboard” worksheet via a macro
- Automatic renaming of the data input worksheets via a macro that utilizes input cells and a CONCATENATE function
- VLOOKUP data with error resolution embedded in the formulas
- Contrasting color background for Pivot Table data that automatically updates with the size of the table when the slicer is utilized
- Set print area for ease in dashboard snapshot record-keeping

Results Achieved

Instead of mindlessly reviewing employees’ accounts, the EAR Analysis uses a scoring model to quantify an employee’s fraud risk potential and displays the total score by “Top Ten” or “Selection” (e.g., branch location, department, etc.) in an easy to follow dashboard view. Moreover, it is easy to determine what factors (e.g., credit score significantly decreased from the prior period to the current period, position, etc.) attributed to an employee’s total score. A user can then determine if reviewing the employee’s account is further warranted.

We also consider the EAR analysis in the risk assessment phase for various audits or reviews, including but not limited to:

- Branch audits
- Cash over and short activity
- Reviewing delinquencies and charge-offs by loan officer or funder
- File maintenance changes (e.g., due date and interest rate changes, system overrides)
- Payroll

Importing data into the EAR analysis takes approximately ten minutes. We no longer have to review disaggregated data.

How this Practice May Benefit Other ACUIA Members

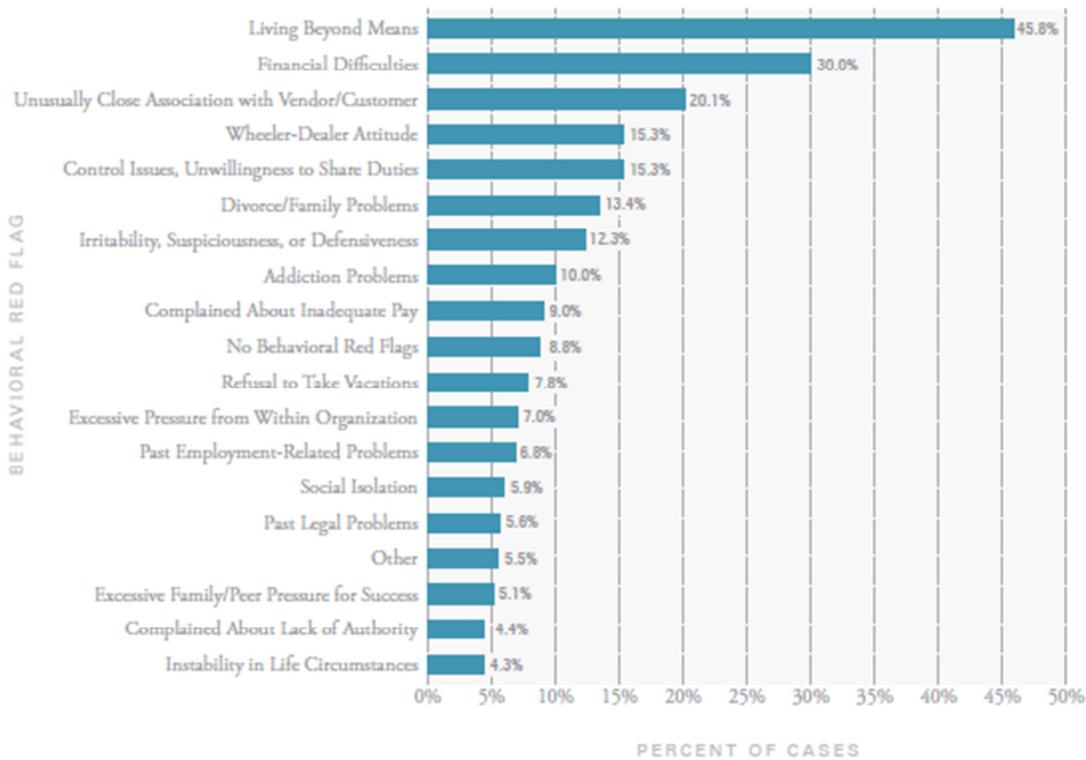
Performing periodic employee account and transaction reviews can be useful in detecting and preventing employee theft, and should be part of a credit union’s fraud prevention toolkit. Reviewing employee accounts has been a popular topic amongst credit union internal auditors and examiners for several years, and its important consideration is further evidenced by the topic being discussed at the 2017 ACUIA Annual Conference.

We believe this practice may benefit other ACUIA members by:

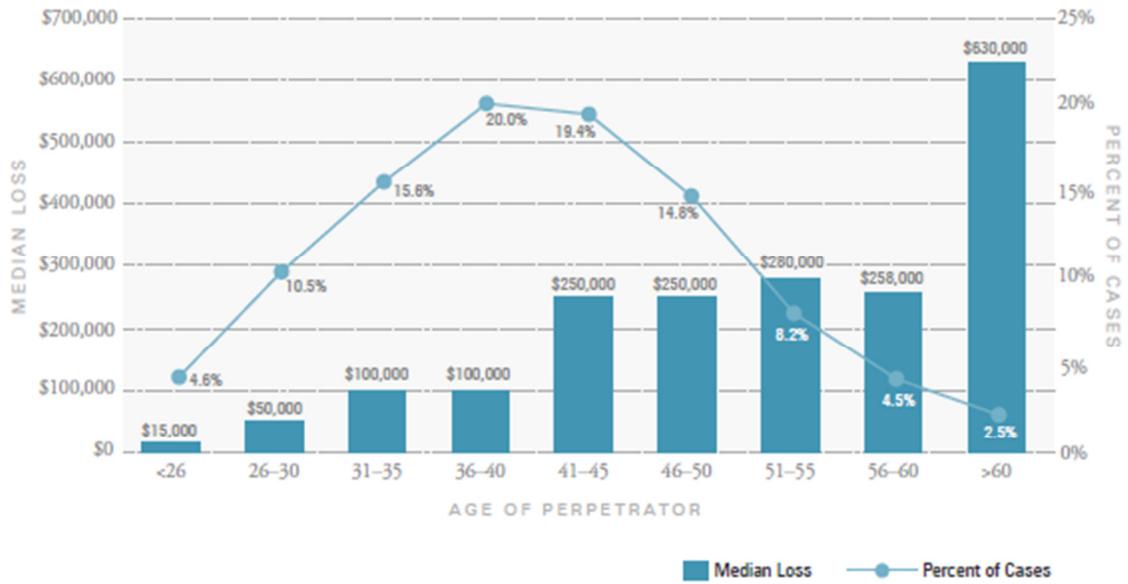
- Providing a risk model that may identify employees living beyond their means or experiencing financial difficulty
- Creating a sustainable process for monitoring employee accounts from a “bird’s eye” view
- Providing an easy to follow dashboard view for audit staff

Relevant Figures from the 2016 ACFE Report to the Nationsⁱ

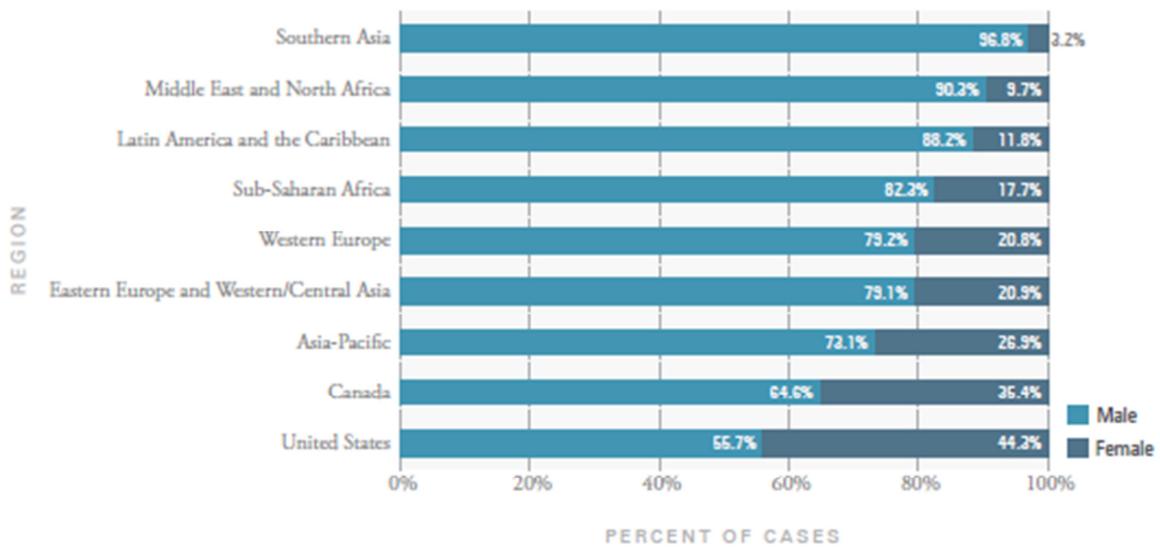
Behavioral Red Flags Displayed by Perpetrators



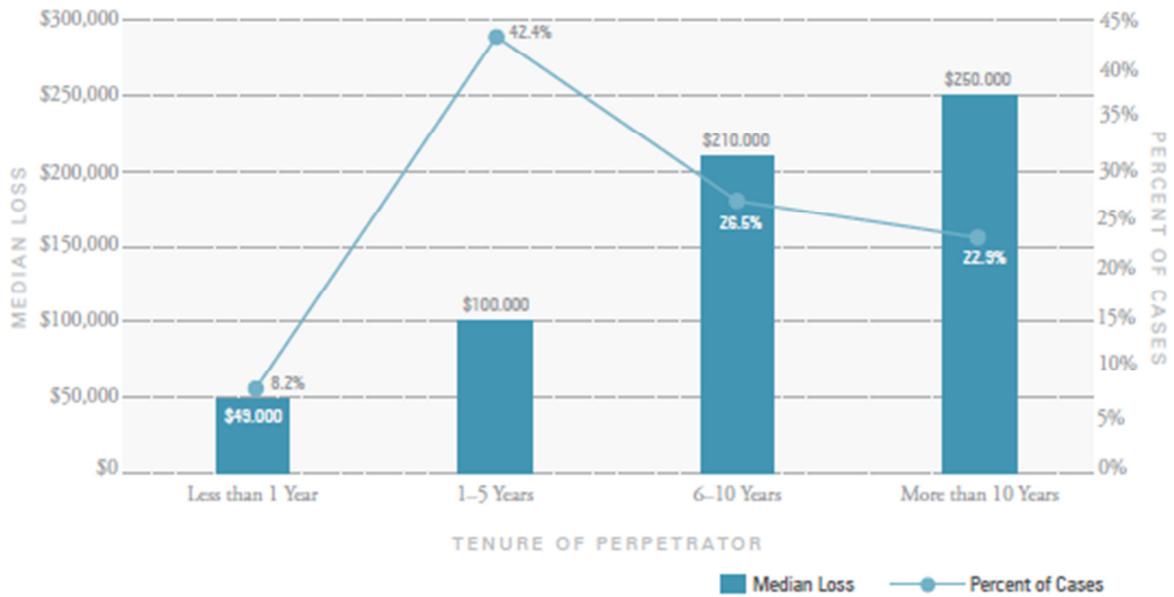
Age of Perpetrator – Frequency and Median Loss



Gender of Perpetrator Based on Region



Tenure of Perpetrator – Frequency and Median Loss



ⁱ Reprinted from the 2016 Report to the Nations on Occupational Fraud and Abuse. Copyright 2016 by the Association of Certified Fraud Examiners, Inc.