FRAUD DETECTION

Recognizing the Symptoms of Fraud

Actg 537

Proactive Fraud Auditing
End of Chapter 4 in Albrecht

| Identify Risk Exposures **1** | Proactively Look for Symptoms & Exposures **3** |
| Identify Fraud Symptoms for Each Exposure **2** | Investigate Identified Symptoms **4** |
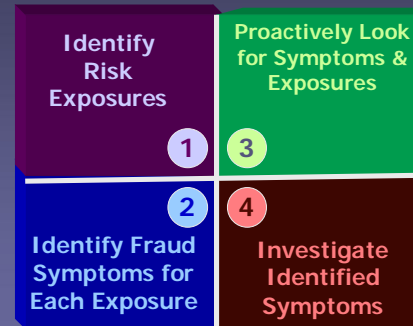
Symptoms of Fraud

Red Flag = Danger

But… a symptom ≠ FRAUD

Early Detection = $ Saved

What are some irregularities in source documents to look for?

- Missing Documents
- "Stale Items" on Bank Reconciliation
- Excessive Voids or Credits
- Payee Names & Addresses = Customer Names & Addresses
- Photocopied Documents
- Payee Names & Addresses = Employee Names & Addresses
- Past Due A/R increasing
- Reconciling Items increasing
- Altered Documents
- Duplicate Payments
- Second Endorsements on Checks

Accounting Anomalies

Things Look Strange

Accounting Anomalies

- Faulty Journal Entries
- Inaccuracies in the Ledgers
  - Ledger Doesn't Balance
  - Master or Control Accounts Do Not Equal the Sum of Individual Customer or Vendor Accounts

Recognize Internal Control Weaknesses

Lack of Segregation of Duties

Lack of Physical Safeguards

Lack of Independent Checks & Reviews

Lack of Proper Authorization

Overriding of Existing Controls

Inadequate Accounting System

Common Examples of Analytical Anomalies

- Unexplained Inventory Shortages or Adjustments
- Deviations from Specifications
- Increased Scrap
- Excess Purchases
- Too Many Debit or Credit Memos

- Significant increase or decrease in account balances
- Physical Anomalies
- Cash Shortages or Overages
- Excessive Late Charges
- Unreasonable Expenses or Reimbursements

Financial Statement Fraud

A Preview
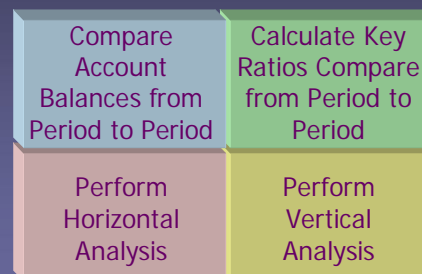
Strange Financial Statement Relationships

↑Revenues with ↓Inventory

↑Revenues with ↓Receivables

↑Revenues with ↓Cash Flows

↑Inventory with ↓Payables

↑ Volume with ↑ Cost Per Unit

↑ Volume with ↓Scrap

↑Inventory with ↓ Warehousing Costs

Strange Financial Statement Relationships

- One change in one account, taken in isolation, means almost nothing!

- ie. A/R increases 300% - is this a "red flag" of fraud? How do you know?

Convert balance sheets & income statements to change statements

Compare Account Balances from Period to Period	Calculate Key Ratios Compare from Period to Period
Perform Horizontal Analysis	Perform Vertical Analysis

Average Company, Inc.
Income Statement
Vertical Analysis

Sales	100%
COGS	60%
Gross Margin	40%
Selling Expenses	10%
General Expenses	15%
Administrative Expenses	10%
Income	5%

Average Company, Inc.
Balance Sheet
Vertical Analysis

Cash	10%
A/R	20%
Inventory	70%
Total Assets	100%
Total Liabilities	70%
Stockholder's Equity	30%
Total Liabilities & SE	100%

Average Company, Inc.
Income Statement
Horizontal Analysis

	2006	2007	2008
Sales	100%	103%	110%
COGS	100%	101%	105%
Gross Margin	100%	102%	105%
Selling Expenses	100%	98%	101%
General Expenses	100%	105%	103%
Administrative Expenses	100%	100%	101%
Income	100%	102%	104%

Extravagant Lifestyles

- Spend What They Steal

- Significant Improvement in Lifestyle

- Flaunt Their "Wealth"

- Living Way Beyond Their Legal Means
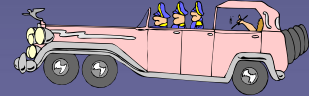
Changed Behavior

- Financial Pressure

- Greed

- Emotional Stress

What is the chain that leads to unusual behavior?

Guilt → Fear → Stress → Behavior Changes

Unusual Behaviors

- Insomnia
- Increase Drinking
- Drug Abuse
- Unusually Irritable & Suspicious
- Unable to Relax
- Lack of Pleasure in Formerly Pleasing Things

- Inability to Look People in the Eyes
- Unusually Belligerent
- Working Standing Up
- Increased Smoking
- Fear of Getting Caught

Why are more frauds discovered through tips & complaints?

- Auditors Focus on Paperwork, Systems & Information

- Fellow Employees Notice Lifestyle Changes

- Complaints & Tips Are Only Symptoms - the Actual Investigation Can Show if a Fraud Exists

Why do employees hesitate to come forward with fraud information?

1. They're Not 100% Sure a Fraud Is Occurring
2. They Don't Want to Wrongly Accuse Someone
3. They Have Heard Horror Stories About What Happens to Whistle Blowers
4. Intimidation by Fraudsters
5. Conditioned Against Squealing

Hotlines

- Hotlines are "800" Phone Numbers Where Employees Can Provide Anonymous Tips & Information

- Sometimes Set Up by the Company or Contracted with a Service or Organization Like ACFE

Providing Whistleblowing Mechanisms

- Anonymous – no fear of retribution

- Independent – report to party not involved in misconduct

- Accessible – several channels of contact

- Follow up – investigation and corrective action where appropriate

Providing Whistleblowing Mechanisms

- Proper whistleblowing can be complicated. When and how do you do it?

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Whistleblowing Case

- Marta Andreasen, Chief Accounting Officer for the European Commission

- Argentinean-born Spanish Accountant
- Won the 2004 ACFE Sentinal Award

So, you want to be honest…?

- Andreasen reported that the $120 Billion EC budget was "massively open to fraud", computer system shortcomings
  - Accounting system in Excel
  - Little double-entry bookkeeping
  - Software allowed journal entry changes with no audit trail
  - Insufficient audit oversight

So, you want to be honest…?

In 2002 she was suspended from her position for "insubordination and lack of loyalty"; in 2005 she was fired.

During her the time of her suspension her staff found over 10,000 instances of possible fraud in the EU accounts

Her quote: "In America they like heroes; in Europe they don't."

Interview

Data-Driven Fraud Detection

Detection Approaches

- Deduction – reasoning from the general to the particular (or from cause to effect), i.e. a car recall.

- Induction – reasoning from details to general principles (from symptoms back to cause), i.e. a car inspection

Proactive (Deductive) Method of Fraud Detection

1. Understand the Business
2. Identify Possible Frauds That Could Exist
3. Catalog Possible Fraud Symptoms
4. Use Technology to Gather Data About Symptoms
5. Analyze Results
6. Investigate Symptoms

Deductive Fraud Detection

- Look at operations and use industry and firm knowledge to search highest risk fraud areas:
  - Ex. Medicare Fraud
  - Ex. For a company with high cash sales, look for cash skimming, unrecorded sales.
  - Example: KICKBACKS

Symptoms of Kickback Scheme

Analytical Symptoms
- Increasing prices
- Larger order quantities
- Increasing purchases from favored vendor
- Decreasing purchases from other vendors
- Decreasing quality

Symptoms of Kickback Scheme

Behavioral Symptoms
- Buyer doesn't relate well to other buyers and vendors
- Buyer's work habits change unexpectedly

Symptoms of Kickback Scheme

Lifestyle Symptoms
- Buyer lives beyond known salary
- Buyer purchases more expensive automobile
- Buyer builds more expensive home

Symptoms of Kickback Scheme

Control Symptoms
- All transactions with one buyer and one vendor
- Use of unapproved vendors

Document Symptoms
- 1099s from vendor to buyer's relative

Symptoms of Kickback Scheme

Tips and Complaints
- Anonymous complaints about buyer or vendor
- Unsuccessful vendor complaints
- Quality complaints about purchased products

Data Analysis

Analysis techniques that are most commonly used by fraud investigators:

- Data Preparation
- Digital Analysis
- Outlier Investigation
- Stratification and Summarization
- Time Trend Analysis
- Fuzzy Matching
- Benford's Law

Deductive Fraud Detection
Advantages & Disadvantages

- Advantages
  - Identifies specific frauds, not just symptoms

- Disadvantages
  - Expensive
  - Requires extensive knowledge of business and types of frauds before

Inductive Fraud Detection

- Data Mining
- Digital Analysis

Data Mining

- Search for global patterns or relationships that exist in a database but are obscured by the amount of data.

Data Mining

- Most common uses
  - Uncovering abnormal patterns
  - Risk management
  - Pattern classification
  - Trend analysis
  - Predicting future behavior
  - Discovering relationships

Data Mining

- Software Packages: IDEA, ACL, Access
- Advantages:
  - Easy to use, inexpensive
- Disadvantages:
  - Difficulty working with large databases
  - Broad symptoms, not specific frauds
  - Their limitations may result in "false signals" – you must be skilled!

Digital Analysis

- Computerized analytical review, using usual accounting relationships, and mathematical properties, like Benford's Law.

- This can be done with special software applications (IDEA) or with office suite software (MS Office).

Digital Analysis
Advantages & Disadvantages

- Least expensive, relatively easy to use
- Use on any size database

- Looks at a large company as a whole, not precise, broad identification of symptoms, does not detect specific frauds
- "Shotgun Approach"

End
Fraud Detection

Fraud Examination

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