

MIS 5208 – Lecture 04 – Fighting Fraud

Ed Ferrara, MSIA, CISSP
eferrara@temple.edu

Learning Objectives

- Become familiar with the different ways in which organizations fight fraud.
- Understand the importance of fraud prevention.
- Understand how to create a culture of honesty and high ethics.
- Understand why hiring the right kind of employees can greatly reduce the risk of fraud.
- Understand how to assess and mitigate the risk of fraud.
- Understand the importance of early fraud detection.
- Understand different approaches to fraud investigation.
- Be familiar with the different options for legal action that can be taken once fraud has occurred.

How Organizations Fight Fraud

Organizations fight fraud by implementing:

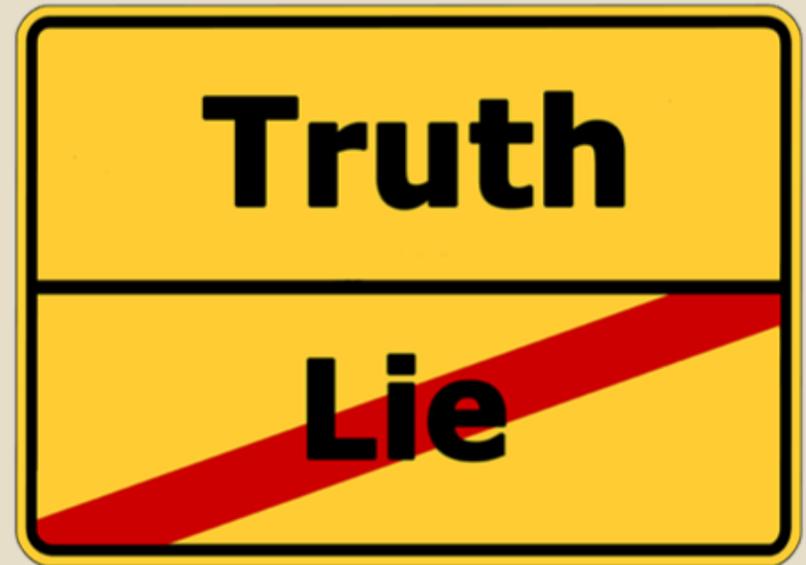
1. Fraud prevention
2. Early fraud detection
3. Fraud investigation
4. Follow-up legal action and/or resolution

Remember this ...

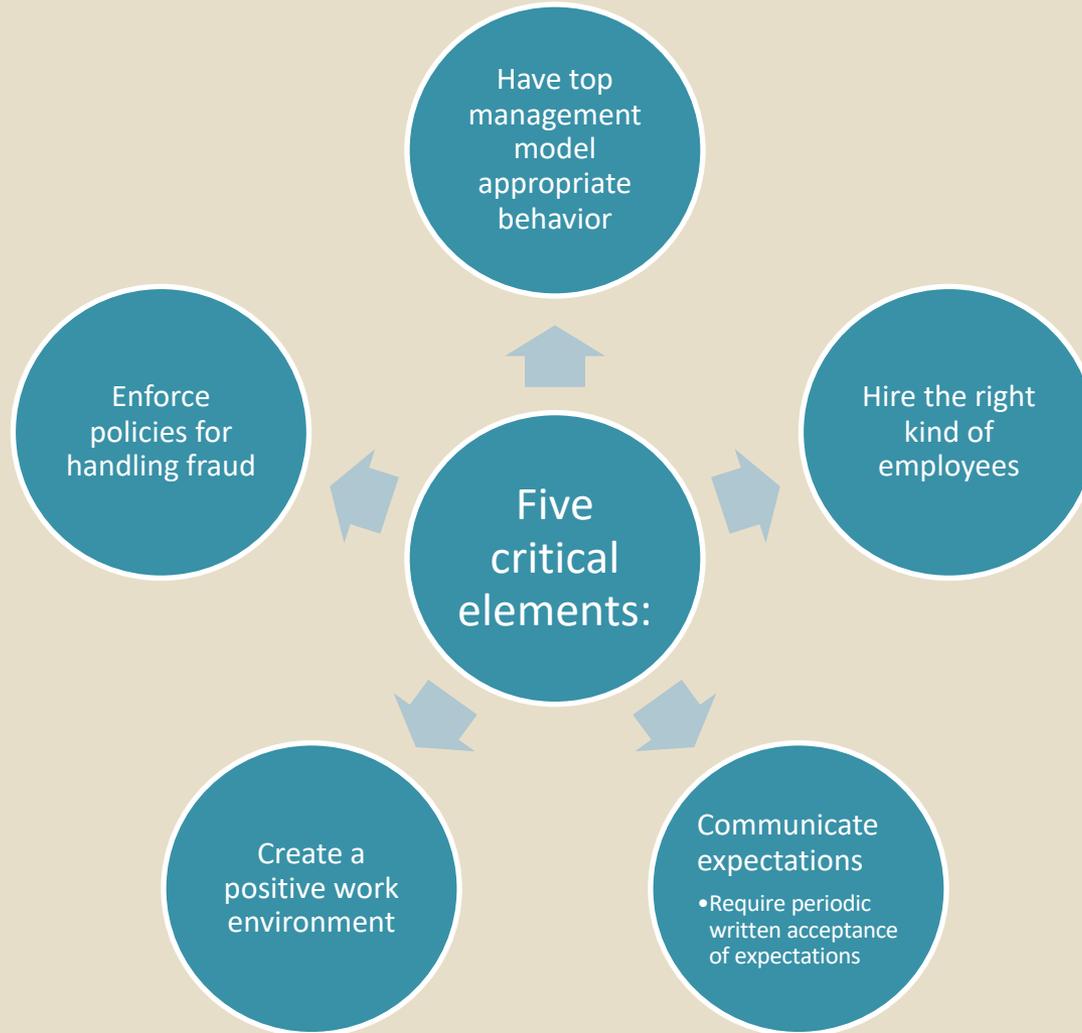
There are four fraud-fighting activities that organizations can use: (1) fraud prevention, (2) proactive fraud detection methods, (3) fraud investigation once fraud is suspected, and (4) legal follow-up of fraud perpetrators. Many organizations focus on the last two, which are the most costly and least effective. An overview of these four fraud-fighting activities is given in this chapter.

Fraud Prevention

- Fraud prevention is the most cost-effective way to reduce fraud
- Involves two fundamental activities:
 - Create and maintain a culture of honesty and high ethics
 - Assess the risks for fraud, develop concrete responses to mitigate the risks, and eliminate the opportunities for fraud



Fraud Prevention – Five Critical Elements



Fraud Prevention – Proper Modeling



Set the Tone at the Top

Don't want to teach someone a "lesser" lesson?
BE A ROLE MODEL
and set a good example.

Don't let the bad behavior of others be an excuse to also act badly.

You'll know you're on the right track when, if everyone imitated your actions, the world would be a nicer place.

Lead by example.

Excerpt from LOSING YOUR SHIRT



Do not act one way and expect others to behave differently

- Do not tolerate:
 - Dishonest
 - Unethical behavior
- Understand the effects of bad modeling



Fraud Prevention - Employment

Hire the Right
Kind of Employees

Hiring procedures
include:

- Background investigations
- References
- Tests for honesty



Ethical Maturity Model

Ethical Leadership
Helping Others to be Ethical

Ethical Courage
Willingness to Pay the Price for Ethics

Application of Ethics to Business Situations
Fraudulent Practices, Misleading Advertising, Unfairness

Personal Ethical Understanding
Right/Wrong, Fairness, Honesty, Personal Integrity, Respect for Others

Fraud Prevention - Communication

- Communicating Expectations of Honesty and Integrity
- Identify and codify appropriate values and ethics
- Training employees in fraud awareness
- Communicating consistent expectations about punishment of violators
- Creating a Positive Work Environment
- Fraud occurs less frequently when employees have
 - Positive feelings about an organization
 - A sense of ownership in the organization

Proper Handling of Fraud and Perpetrators

- Facts are investigated thoroughly
- Firm and consistent actions are taken against perpetrators
- Risks and controls are assessed and improved
- Communication and training are ongoing

Eliminate Fraud Opportunities

- Organizations should:
 - Identify sources and measure fraud risks
 - Implement preventative and detective controls
 - Create widespread monitoring by employees
 - Have internal and external auditors

Early Fraud Detection

Remember this ...

Fraud detection involves activities to determine whether or not it is likely that fraud is occurring. Fraud detection allows companies to identify suspicions or predications of fraud. Historically, most frauds were caught by chance. In recent years, two major proactive fraud detection developments have occurred: (1) installing hotlines or whistle-blower systems and encouraging employees and others to report any suspicious activity they see and (2) using technology to mine various databases looking for unusual trends, numbers, relationships, or other anomalies that could indicate fraud.

- Three Primary Ways to Detect Fraud
 - By chance
 - By providing “whistle-blowing” systems
 - By data mining

Early Fraud Detection – Whistle-Blowing

- A reporting hotline or online system that allows others to call in or submit an anonymous tip of a fraud suspicion
- Examples:
 - Internal systems/hotlines
 - The Association of Certified Fraud Examiners
 - Allegience

Early Fraud Detection - CCATS

- Mining Company Databases
 - Mining databases for suspicious trends, numbers, and other anomalies.

Fraud Analysis: Useful Information

- Issues
 - Conflicts of interest
 - Unknown relationships
 - Abnormal patterns of activity
 - Errors in key processes
 - Control weaknesses
 - Hindsight, insight, foresight
- Business Operations and Expense Areas
 - Accounts payable
 - Claims
 - Damaged Goods
 - Healthcare
 - Insurance
 - Loss
 - Expense reimbursement
 - General Ledger
 - Travel and Entertainment

Vendor Attribute Capture

- Total number of vendors
- Vendors without:
 - Addresses
 - TAX ID
 - Are they receiving payment?
 - Electronic transfers
 - Paper checks

Vendor Activity Assessment

- Number of Vendors
- Frequency of Use
- Number of Active Users Compared Against Total Vendors
- Unused Vendors can be source of internal abuse
- Vendor Identity Abuse

Name Mining

- Looking for Fictitious Vendors
 - Fictitious Names
 - Use their initials in the name of a vendor
 - Anagrams
 - Others
 - Substitution
 - Insertion and Omission
 - Transposition
 - Number Substitution

Employee Vendor Relationships

- Employee and Vendor Name are Different
 - Common Addresses
 - Addresses that are different but are at the same geographic location:
 - 201 College Avenue
 - 669 West Chestnut Street
 - Phone Number
 - TAX ID
 - Zip Codes



Proximity Analysis

- Mailbox Services
- Anonymous
- These mail drop have the appearance of a physical address
- Proximity location of vendor to actual employees
 - Employee Addresses
 - Vendor Addresses
- Proximity Analysis

MailLink
848 N. Rainbow Blvd.
Las Vegas, NV 89107
Phone: 702-258-2968
Fax: 702-258-3357

BBB RELIABILITY PROGRAM
BBBONLINE

Mail Forwarding Made Easy
View Your Mail Online
Prestigious Vegas Street Address
FREE Resident Agent
LEARN MORE
SIGN UP NOW!!!

New Customers: For More Information, Call Toll Free: 888-267-1109 Sunday, January 11, 2015

Mail Forwarding Local Rental Store Services Find Us In Las Vegas F.A.Q. Contact Us Home

Client E-mail: Password: **Go** [Forgot My Password](#)

Mail Forwarding 

No State Income Tax • Free Resident Agent

Mailbox Rentals - Est. 1987

Our online mailboxes have complete online access with account management including viewing mail descriptions, optional scanning of mail, adding money online, setting ship dates and methods, and changing the forwarding address as often as you wish.

We offer UPS, Fed Ex, DHL, US postal Service, and many other services. We have mailbox customers located all over the country, many have corporations, some are RV'ers, some are part time residents, and everyone gets the best mail forwarding service possible.

Is your mail forwarding facility charging you too much and giving you no service.WHY? Mail Forwarding wherever you are. We are open 9-5 Monday through Friday and 9-1 Saturdays PST

WE NOW OFFER SCANNING OF MAIL FOR YOUR TIME SENSITIVE NEEDS

Vendor Trending Analysis

- Accounts Payable
- Claims Payable
- Fraud Payment Acceleration
 - Small initial amounts of fraud
 - Amounts and frequency increases
 - Test Phase
 - Confidence Phase
 - Greed Phase
- Trend Payments to Vendors
- Valley and Spike Payment Patterns
 - Long periods of inactivity between periods of very high activity
 - Unusually high periods of activity

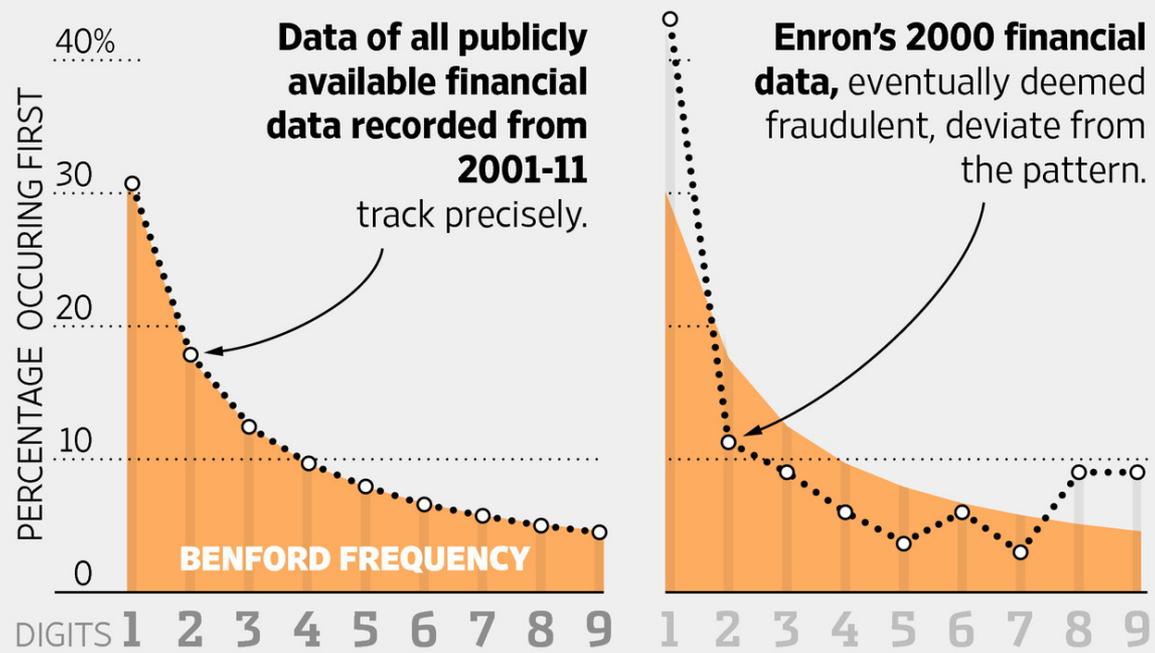
Payment Trend Analysis

- Calendar
 - By Day of Week
 - By Day of Month
 - By Month
 - Checks created on weekends (Saturdays and Sundays)
 - Date created
 - Date posted
- Benford's Law
 - The first digit should be a 1... (30% of the time)

Benford's Law

Who's No. 1?

Benford's Law expects 30.1% of numbers in a list of financial transactions to begin with '1.' Each successive digit should represent a progressively smaller proportion. Below, orange indicates the expected Benford frequencies. When digits stray from the pattern, fraud may be to blame.



Source: Dan Amiram, Columbia University

The Wall Street Journal

Check Sequence Analysis

- G/L
- Cash Receipts
- Identify Gaps in Check Sequences

Expense, Payroll, and Vacation Controls

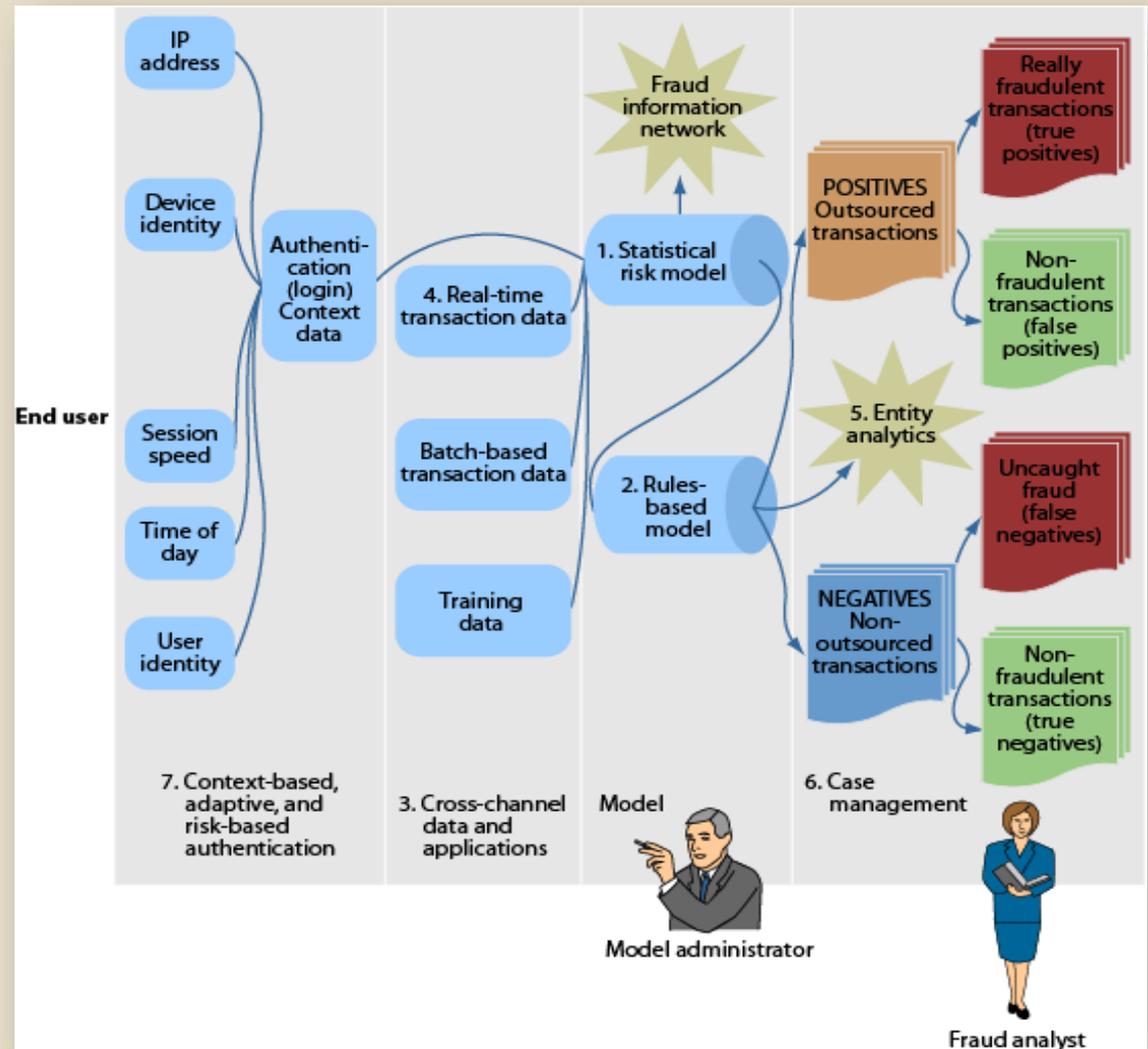
- Analysis of Overtime Hours
 - Reasonableness
 - Consistent with role
- Holiday Hours
 - Reasonableness
 - Consistent with role
- Purchasing Cards
 - Spending over approval limits
 - Split transactions to avoid limit
 - Collusion between subordinate and supervisor to avoid approval scrutiny
- Vacation Hours
 - Reasonableness
 - Consistent with role
 - Large amounts of vacation outside of guidelines

Other Analysis Areas

- System Access Logs
- Maintenance Files
- Social Media
 - The Price is Right Fraud
- Physical Investigations
 - Surveillance

Continuous Auditing

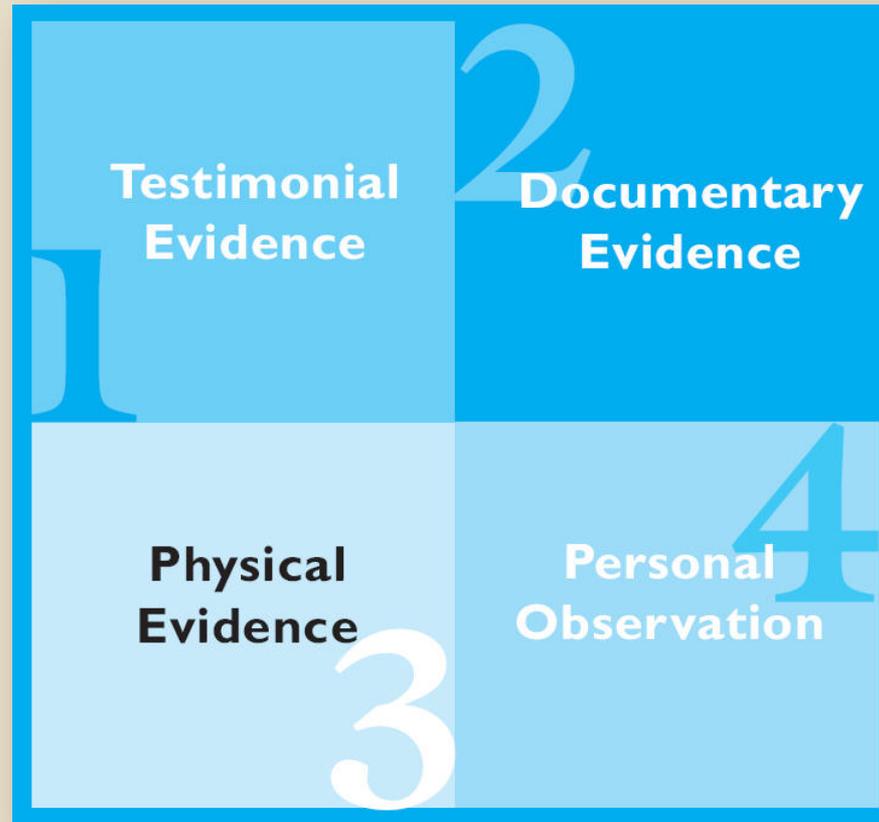
- Programmatic Auditing
- System Based



Fraud Investigation - Predication

- Fraud investigation should occur only if a predication of fraud exists.
- Predication refers to the circumstances, taken as a whole, that would lead a reasonable, prudent professional to believe a fraud has occurred, is occurring, or will incur.
- Considerations before investigating fraud:
 - Need management's approval
 - Pursued only when predication exists
 - Investigators rely heavily on interviews, computer searches, and accounting records and internal controls.

The Evidence Square



Fraud Investigation - Documentary Evidence

- Gathered from paper, computers, and other written or printed sources
- Techniques:
 - Document examination
 - Data mining
 - Public records searches
 - Audits
 - Computer searches
 - Net worth calculations
 - Financial statement analysis
 - Corporate databases
 - E-mail servers



Fraud Investigation – Physical Evidence

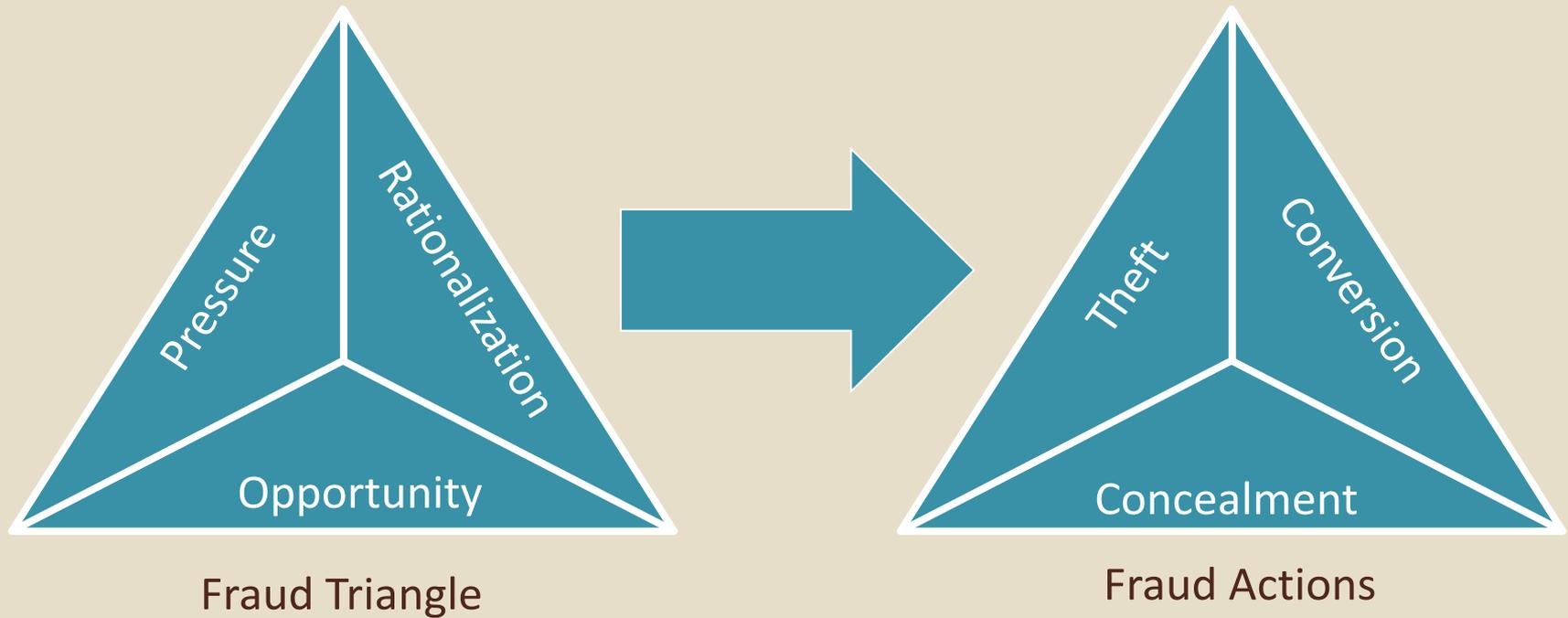
- Fingerprints
- Tire marks
- Weapons
- Stolen property
- Identification numbers
- Marks on stolen objects
- Other tangible evidence

- Techniques:
 - Forensic analysis by experts

Fraud Investigation

- Personal Observation
 - Evidence that is sensed (seen, heard, felt, etc.) by the investigators
- Techniques:
 - Invigilation
 - Surveillance
 - Covert operations

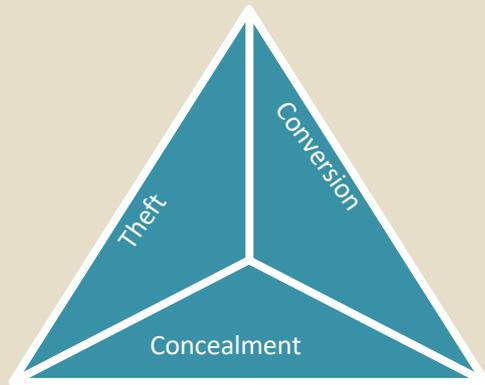
Fraud Elements



The Fraud Action Triangle

Theft Act

- Catch perpetrators in the embezzlement act or to gather information about the actual theft acts

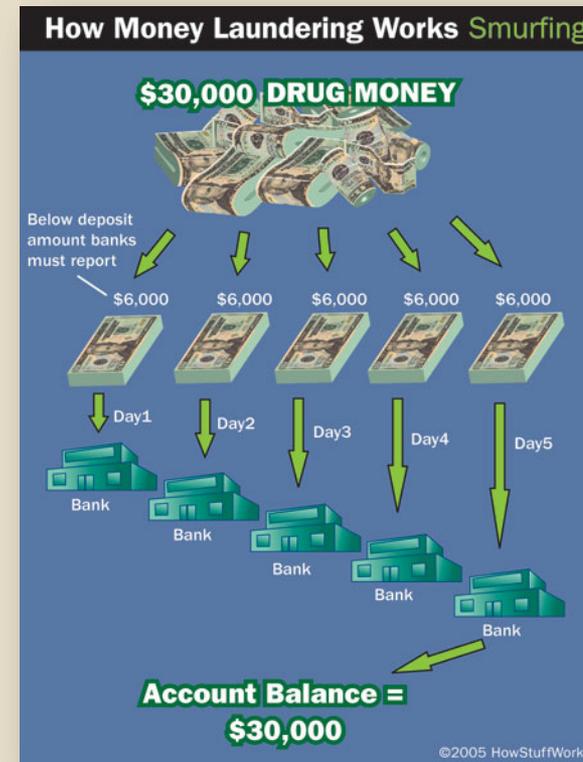
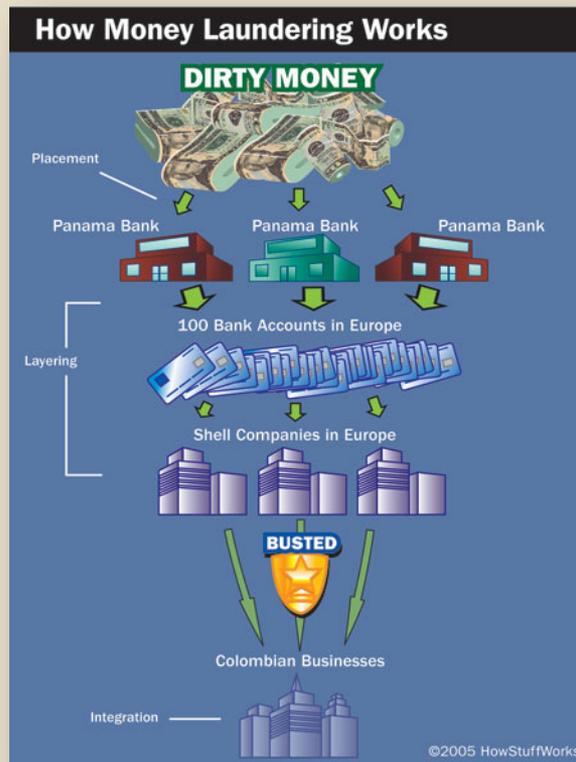


Concealment

- Focus on records, documents, computer programs and servers, and other places where perpetrators conceal or hide their dishonest acts

Fraud Investigation – Conversion (Money Laundering)

- The Fraud Element Triangle: Conversion
- Search for ways the perpetrators spent or used their stolen assets.



Conducting a Fraud Investigation

- Undertaken only to “establish the truth”
 - Experienced and objective investigators
 - Confidentiality
 - Need to know
 - Evidence independently corroborated
 - No questionable investigative techniques
 - Fair and objective communication
- Organizations face the options to...
 - Take no legal action
 - Pursue civil remedies, and/or
 - Pursue criminal action

•

Thank you