

Frauds Found in NFPs

Professional Skepticism

Ch.
3

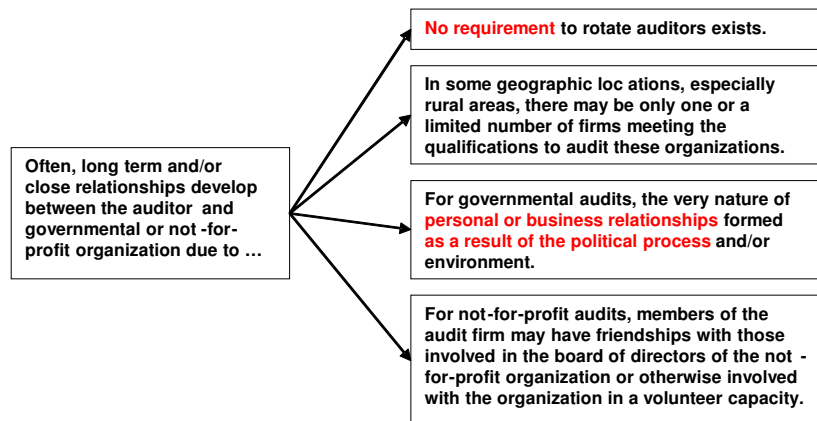
Professional skepticism is an attitude that requires the auditor to have a **questioning mind** and to critically assess audit **evidence (show me, don't tell me!)**



Six Characteristics of Skepticism

1. **Questioning mind**
 - Disposition to inquiry with some sense of doubt
2. **Suspension of judgment**
 - Until appropriate evidence obtained
3. **Search for knowledge**
 - Investigate beyond the obvious with desire to corroborate
4. **Interpersonal understanding**
 - Motivations/perceptions can lead to biased/misleading information
5. **Autonomy**
 - Self-direction, moral independence & conviction to decide for oneself
6. **Self-esteem**
 - Self-confidence to resist persuasion & to challenge assumptions

Professional Skepticism



Warning Signs of Fraud Risk

Ch.
1

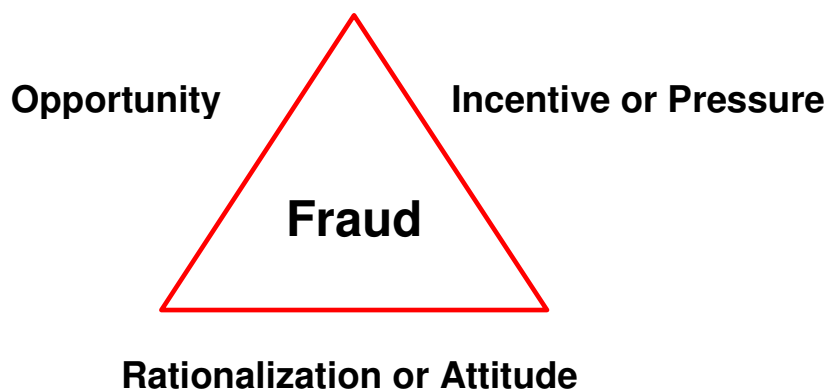
Warning!	An organizational culture of arrogance and management entitlement.
Warning!	Accounting policies relying too heavily on management's judgment.
Warning!	Accounting policies that seem too aggressive especially in light of accounting and finance staff expertise.
Warning!	Overly centralized control over financial reporting especially in organizations with larger or more adequate staff in the areas of accounting and finance.
Warning!	Departure of key senior management personnel.

Warning Signs (continued)

Ch.
1

Warning!	Failure to listen to key accounting/finance personnel within the organization.
Warning!	Receivables growing at a faster rate than the related revenues.
Warning!	Periods of prolonged success especially when economic, industry, or organizational conditions indicate otherwise.
Warning!	Difficulty in paying bills on a timely basis or less timely than in prior years.
Warning!	Transactions lack economic purpose (may be indicative of kickbacks as well as misappropriation of assets or financial statement fraud).

The Fraud Triangle (remember?!)



Fraud Risk Factors (factors contributing to fraud)

- Pressure or Need (68%)
 - Reduce or eliminate the pressure
- Opportunity (18%)
 - Put roadblocks in place to deter and prevent
- Rationalization (14%)
 - Train and inform

Note: Percentages from PWC study

Incentive or Pressure

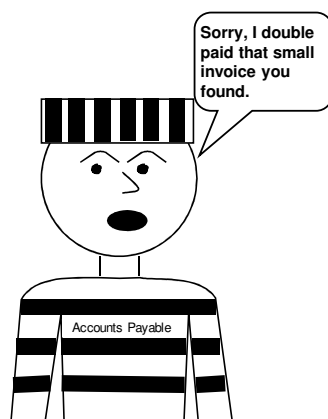
- Not-For-Profit organizations feel **pressure** to provide more or higher-quality services at a time when donors are not contributing at a pace to keep up with the demand.

Opportunity

Not-For-Profit entities may have a number of locations taking **cash** in payment of services. Such **cash** may be collected by persons lacking knowledge of existing internal controls.

Rationalization or Attitude

Employees of not-for-profits are often **paid le\$\$** than their counterparts in the private sector. Some employees **rationalize** misappropriation as compensation for their low salary levels.



The "Typical Fraudster"

- Trusted employee
- Dedicated and often works long hours
- Dislikes mandatory vacation policies
- Resents cross-training
- Seen as likeable and generous
- Deceptive and usually an adept liar
- Think "Sweet Miss Betty"

Pressures for Fraud

Financial targets more difficult to achieve	47%
Fear of losing job	37%
Desire to earn personal performance bonuses	27%
For senior executives to achieve desired financial results	25%
Bonuses not paid this year	23%
Maintain financial performance to ensure lenders do not cancel debt facilities	18%
There is a belief that competitors are paying bribes to win contracts	13%
Other factors	14%

The word "Realistic" seems to have been shelved.

#2 I've got to do it or else I'll get fired. There's no good jobs out there. I'll do it just this one time.....

Unique Characteristics of Not-for-Profits

<i>Significant Contributions</i>	<i>Lack of a Profit Motive</i>	<i>Ownership Interests</i>
Significant amounts of contributions of resources are received from resource providers not expecting commensurate or proportionate financial return	The organization operates for purposes other than to provide goods or services at a profit	Ownership interests such as those found in business enterprises are absent

Significant Contributions

- Traditional source of funding
- May be restricted
- May be in the form of grants
- May include significant services
- Variety of legal **constraints** and **controls**



Lack of a Profit Motive

Not-for-profit entities are organized for and operated to achieve a particular mission rather than to make a profit from their operations.

“Non-Profit doesn’t mean No-Profit!”—Tony H.



Ownership Interests



There are no “owners” of the typical not-for-profit entity, and therefore, no owners exist to protect the net assets of the not-for-profit entity.

a.k.a. “nobody is paying attention”

Users of Not-for-Profit Financial Reports

1	<i>Resource providers</i> – Includes those that are directly compensated for providing resources and those not directly and proportionately compensated for providing resources.
2	<i>Constituents</i> – Those who use and benefit from services provided by the not-for-profit organization.
3	<i>Governing & oversight bodies</i> – Those responsible for establishing policies and for overseeing and evaluating management of not-for-profit organizations.

Possible Significant Transactions: Not-for-Profits

- Short- or long-term debt
- Real estate purchases or sales
- Public/private partnerships
- Early extinguishment of debt



Continuing Professional Education

aicpalearning.org

Lack of a Profit Motive

Ch.
2



Goods and services provided by not-for-profit organizations are often made available to the public at little or no charge.

Contributions.....

Continuing Professional Education

aicpalearning.org

MAJOR theme today

9-1



Limited (meaning qualified/experienced/motivated /etc) administrative and/or accounting and finance in not-for-profit functions represent **PERFECT** conditions for fraud

Continuing Professional Education

aicpalearning.org

Accounting Estimates – AU 342 Internal Control

- Review of reasonableness of assumptions and resulting estimates
- Consideration of the need to use the work of specialists
- Consideration of changes in previously established methods to arrive at accounting estimates (same ole')
- ★ • Comparison of prior accounting estimates with subsequent results to assess the reliability of the process used to develop estimates (Make sure you do this!!! Do you ever do it?!)
- Consideration by management of whether the resulting accounting estimate is consistent with the operational plans of the entity

Continuing Professional Education

aicpalearning.org

Auditor's Test of Process to Make Estimates

- Identify whether there are controls over the preparation of accounting estimates and supporting data (**almost never is**)
- Identify the sources of data and factors that management used in forming the assumptions, and consider whether such data and factors are relevant, reliable, and sufficient (**are the sources good? Bad in, bad out**)

Auditor's Test of: Process to Make Estimates

- Evaluate whether the assumptions are **consistent with each other**, the supporting data, relevant historical data, and industry data
- Analyze **historical data** used in developing the assumptions to assess whether the data is comparable and consistent with data of the period under audit, and consider whether such data is **sufficiently reliable for the purpose**
- Consider whether **changes in the law or industry** may cause other factors to become significant to the assumptions (**this can be a HUGE factor**)

Auditor's Test of Process to Make Estimates

- Review available documentation of the assumptions used in developing the accounting estimates and inquire about any other plans, goals, and objectives of the entity, as well as consider their relationship to the assumptions
- Consider using the work of a specialist regarding certain assumptions (section 336, *Using the Work of a Specialist*) (**very important for specialized industries**)
- **Test** the calculations used by management to translate the assumptions and key factors into the accounting estimate (**How many times is this done? Often? Seldom? Not at all?**)

Journal Entries

- Used by management to perpetrate fraudulent financial reporting
- **Top-sided**, standard (recurring), and nonstandard (non-recurring) journal entries.

3-5a

Journal Entries **Red** Flags

- Made to unrelated, **unusual**, or **seldom-used** accounts
- Made by individuals who typically do not make journal entries
- Recorded at the **end of the period** or as **post-closing entries** that have little or no explanation or description
- Made either before or during the preparation of the financial statements to accounts **that do not have account numbers** (Dept. of Defense / WorldCom!!!)

Continuing Professional Education

aicpalearning.org

3-5b

Journal Entries **Red** Flags

- Made on holidays or other non-working days
- Containing **round numbers** or a consistent ending number (Post Office-- **\$134m and 60m** on July 21, 2008 and July 17, 2008, (according to the GAO) respectively)
- Unusual entries during both the **year-end** and **quarter-end**
- Any entries that were **reversed at the beginning of the subsequent period** should be scrutinized more carefully.
- Unusual entries that affect revenue

Continuing Professional Education

aicpalearning.org

Spreadsheet Risks (no way!?!)

- **Complexity** of the spreadsheet and calculations
- **Purpose** and use of the spreadsheet
- Number of spreadsheet users
- Type of potential input, logic, and interface **errors**
- **Size** of the spreadsheet (i.e., 263A calc.)
- **Degree of understanding and documentation of the spreadsheet** requirements by the developer
- Uses of the **spreadsheet's output**
- Frequency and extent of changes and **modifications** to the spreadsheet

Spreadsheet Controls

(you're lucky if you find an entity doing 3+ of these in your entire career!!)

- Change control
- Version control
- Access control
- Input Control
- Security and integrity of data
- Documentation
- Development lifecycle
- Back-ups
- Archiving
- Logic inspection
- Segregation of duties
- Overall Analytics (non-creator checking accuracy & relevancy)

Most popular in NFPs!!

7-1a

Indicators of Procurement and/or Contracting Fraud

- **Unusual** vendor names and addresses
- **Copies** of invoices, purchase orders, or receiving documents rather than original documentation
- **Orders** for materials/supplies **already on hand in sufficient quantities** or that are **scheduled for disposal/discontinued use due to obsolescence**
- **Orders** for materials/supplies **not consistent with the operations and/or mission of the organization**
- **Delivery addresses not part of the purchaser's physical locations**

Continuing Professional Education

aicpalearning.org

When you think you have the perfect mouse trap.....

- <http://www.youtube.com/watch?v=-L6UWk6-Hg8>
- THIS IS WHY AN ETHICAL ENVIRONMENT AND ETHICAL PEOPLE ARE SO IMPORTANT

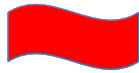
Continuing Professional Education

aicpalearning.org

Ch.
1

Computer Fraud

- Technology plays major role in almost all aspects of an organization's operations.
- CPA or CFO (this is you guys!!) may be unable to keep up with technological changes.



Continuing Professional Education

aicpalearning.org

Ch.
1

Computer Fraud





Internal accounting controls that may be effective in preventing detecting, and deterring computer fraud include the following:	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	Separation and rotation of duties both within and external to the technology function.
<input type="radio"/> <input type="radio"/> <input type="radio"/>	Timely update of accessible computer applications when personnel change jobs or when the requirements of their current position change.
<input type="radio"/> <input type="radio"/> <input type="radio"/>	Periodic and surprise inspections and security reviews.
<input type="radio"/> <input type="radio"/> <input type="radio"/>	All control policies and procedures required to be written (zero tolerance for deviations from this policy).
<input type="radio"/> <input type="radio"/> <input type="radio"/>	Offline controls and limits such as batch controls and hash totals where indicated and cost-effective.

Continuing Professional Education

aicpalearning.org





11-1b

In addition to the controls available through the financial institution, NFPs can implement other controls over procurement cards. For example:

	Prohibiting the use of procurement cards for the purchase of gift cards.
	Blocking the cash option on all procurement cards.
	Written policies and procedures related to the issuance and use of procurement cards.
	Requiring employees with procurement cards to execute a “cardholder’s agreement” prior to receiving their procurement card. This agreement should specifically state the employee’s responsibilities with respect to use of the card and the consequences if the procurement card is used fraudulently.

11-1c

In addition to the controls available through the financial institution, NFPs can implement other controls over procurement cards. For example:

	Submission of receipts with card statements and review of these receipts by a responsible and appropriate party (i.e., supervisor, administrative support staff, accounts payable staff, etc.).
	Prompt processing of card statements at the user level (i.e., within x days of receipt) and timely forwarding of same for payment.
	Review of periodic “exception reports” whether developed internally or by the financial institution.
	Random audits of procurement card purchases by the internal audit or finance department.

Speaking of Segregation of Duties (SoD)!!

Continuing Professional Education

aicpalearning.org

- The Segregation of Duties (SoD) control is the most important set of controls that your organization can have.
- It is the cornerstone of any formal internal controls framework and is essential to the detection and prevention of fraud.
- Effective segregation of duties reduces the risk that fraud error (intentional or unintentional) will remain undetected by providing for separate processing by different individuals at various stages of a transaction and for independent reviews of the work performed.

Continuing Professional Education

aicpalearning.org

- **SoD controls provide four specific benefits:**

1. The risk of a deliberate fraud is mitigated as the collusion of two or more persons would be required in order to circumvent controls
2. The risk of legitimate errors is mitigated as the likelihood of detection is increased due to additional review(s) of the transaction.
3. The cost of corrective actions is reduced as errors are generally detected relatively early in their lifecycle
4. The organization's reputation for integrity and quality is safeguarded through a system of checks and balances.

- Despite its indispensability as a fraud-mitigation measure, SoD **is one of the most difficult to implement and maintain often due to limited headcount with broadly defined responsibilities, and constantly changing responsibilities.**
- Even under challenging personnel circumstances, it is important to ensure that key duties are adequately segregated or consider compensating controls.

As a best practice, many organizations review their SoD controls on a quarterly basis as part of their controls self-assessment (CSA) and continuous controls monitoring (CCM) processes.

- One of the most common “root causes” of fraud is the lack of SoD controls, weak SoD controls, inappropriate compensating controls, or failure to update SoD controls when responsibilities change.
- Systems automation can play a crucial role in establishing, simplifying, and monitoring all three of the core controls, particularly role-based system access and activity logging.

About Systems Access

- The principle of segregation of duties in an information systems environment is also critical as it ensures the separation of different functions such as transaction entry, on-line approval of transactions, vendor master file initiation, master file maintenance, system access rights, and the review of transactions.
- In the context of application level controls, this means that one individual should not have access rights which permit him or her to enter, approve and review transactions.

Employ systems that provide flexibility and discrete configuration of controls around system access and critical accounts payable paths.

- Specifically, certain employees should have full ability to effect AP transactions, approval rights, and access to information, while some may only be able to
 - affect certain processes, have “read only” visibility or only limited visibility.
- Account funding for supplier payments should have limited access and clear roles. This reduces the need to manually monitor every transaction.

Why are ethics so important in this discussion?



Business operations require trust. Consider the millions of business transactions that take place daily that require mutual trust. Would you go to a job if you didn't trust your employer to compensate you? How many people would shop on the Web if they didn't trust that their financial information would be secure?



The classical economists such as Adam Smith considered economics a branch of ethics. Business activity would grind to a halt without trust, fair dealings, and honest communication.

In his 1995 book, *Trust: The Social Virtues and the Creation of Prosperity*, Francis Fukuyama writes: "One of the most important lessons we can learn from an examination of economic life is that a nation's well being as well as its ability to compete, is conditioned by a single, pervasive cultural characteristic: the level of trust inherent in the society."



In a recent Wall Street Journal article, Psychology professor Steven Davis says that cheating by high school students has increased from about 20 percent in the 1940's to 75 percent today.

“Students say cheating in high school is for grades, cheating in college is for a career.”

People learn about ethics from various sources. Upon what do you base your personal code of ethics?

- Study of history and literature
- USAF Honor Code
- Personal experiences and observations
- Religious beliefs
- Something else



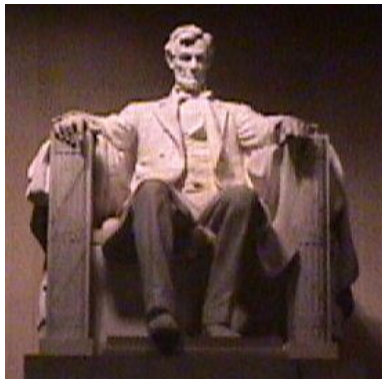


Academic Institutions have established ethics codes for their students, e.g. the U.S. Air Force Academy Honor Code:

**“We Will Not Lie, Steal Or Cheat,
Nor Tolerate Among Us Anyone Who Does.”**

What do you think is the harder part?

- a. Line 1
- b. Line 2



Why is it often so hard to do what's right?
“To sin by silence when they should protest makes cowards of men.” -
Abraham Lincoln

Do you think this relates to line 2 of the USAF Honor Code?

Bad Ethics lead to...

FRAUD

In *criminal law*, **fraud** is the crime or offense of deliberately deceiving another in order to damage them—usually, to obtain property or services unjustly.

AND FRAUD COSTS

MUN-EE!

The Cost of Unethical Decisions



The typical organization loses an estimated 5-6% of its annual revenues to occupational fraud and unethical decisions causing financial harm on the organization.

©2012 Association of Certified Fraud Examiners, Inc.

Continuing Professional Education

aicpalearning.org

A Highly Effective and Almost ^{Ch.} *No-Cost Control*

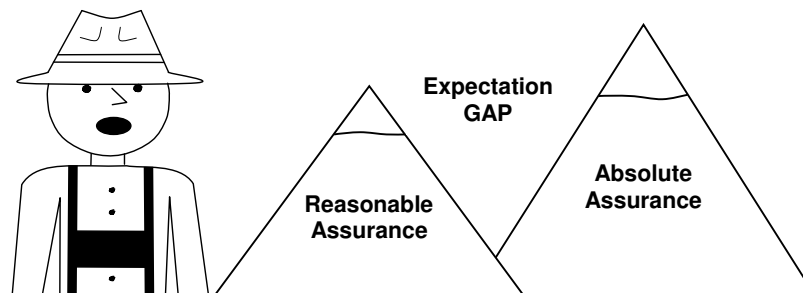
If the “**tone at the top**” is one of zero tolerance and if fraudsters are promptly **disciplined**, employees may be less likely to commit fraud. A **positive** and **open** work **environment**, at all levels of the organization, also helps in preventing, detecting, and deterring fraud.

Continuing Professional Education

aicpalearning.org

...the tone at the “**Tone at the Top**” really does matter, but **what you do matters more** than what you say or a written policy.

Auditor Responsibilities and Marketplace Expectations ^{Ch. 3}



Expectations Gap

(This is disturbing. Do you care?)

- The gap between the auditors' actual standard of performance and the public expectations of auditors' performance (as opposed to their required standard of performance). *Members of the public expect:*
 - Auditors should accept prime responsibility for the financial statements,
 - Auditors “certify” financial statements,
 - A “clean” opinion guarantees the accuracy of financial statements, (“what are you getting paid for then?”)
 - Auditors perform a 100% check,
 - Auditors should give early warning about the possibility of agency/organization failure, and (should we do a better job of this?)
 - Auditors are supposed to detect fraud (is this coming down the road?)
- (“Auditors” includes independent firms and governmental auditors)

Cyber Fraud

- Causes of cyber claims filed by CPA firms in 2021

- 34% hacking
- 32% human error
- 23% social engineering
- 11% ransomware

59 © 2019 Association of International Certified Professional Accountants. All rights reserved.

- Controls all not-for-profit organizations can implement

- Train users on security practices
- Create and test system backups
- Prioritize anti-virus and security patches
- Implement network segmentation controls
- Review existing insurance policies
- Create a written incident response plan
- Monitor logs

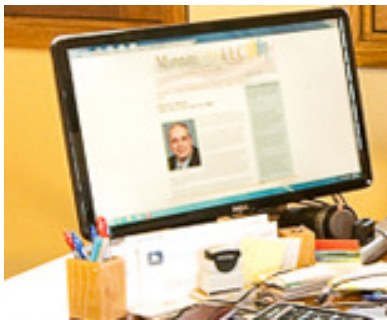
60 © 2019 Association of International Certified Professional Accountants. All rights reserved.

- Best practices for not-for-profits to minimize vulnerability
 - Encryption
 - Multi-factor or two-factor authentication systems
 - Strong controls over cloud and vendor management systems
 - Security awareness training for all employees
 - Internal security controls on embedded devices
 - Incident response plans
 - Formal data retention policy
 - Protecting physical security
 - Annual penetration tests

61 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Data breaches

The release or taking of data from a secure source to an unsecured third-party location (computer).



62 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Data breaches (continued)

- Outsiders
- Insiders
- Accidental loss
- State sponsored

63 © 2019 Association of International Certified Professional Accountants. All rights reserved.

The new generation of cyber fraud

- Cybercrime has its own social networks with escrow services.
- Malware can be licensed and receive tech support.
- You can rent botnets by the hour for your own crime spree.
- Pay-for-play malware infection services have appeared that quickly create botnets.
- A lively market for zero-day exploits (unknown software vulnerabilities) has been established.

<https://www.knowbe4.com/>

64 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Phishing

- Used to gain personal or business information, such as usernames, passwords, Social Security numbers, credit card numbers, and other personal information.
- Often accomplished by using fraudulent email messages that appear to come from legitimate businesses or government agencies.


Phishing (continued)

Date: Today	
E-ZPass Support	Indebtedness for driving on toll road #00839442
Date: Yesterday	
E-ZPass Manager	Payment for driving on toll road, invoice #00162217
District Court	Notice to Appear
FedEx Ground	Unable to deliver your item, #000169181
Date: Last Week	
FedEx 2Day	Unable to deliver your item, #00000496032
Boris Attorneys	Inheritance
County Court	Notice to appear in Court #000933926
State Court	Notice of appearance in Court #0000493961
	Learn Medical Bil... High demand and good pay in medical billing careers
FedEx 2Day A.M.	We could not deliver your parcel, #00269544
FedEx 2Day	Courier was unable to deliver the parcel, ID000557896
m.sourd@mdef5...	Re: 700WFQG
FedEx Internatio...	Unable to deliver your item, #0000374620
no-reply@discov...	Reminder: \$25,000 Discover Personal Loans Video Contest
E-ZPass Agent	Indebtedness for driving on toll road #00678129
E-ZPass Support	Pay for driving on toll road, invoice #00000371690
FedEx Internatio...	We could not deliver your parcel, #000729678
Cash At Home	Local mom makes over \$8740 / month!
Technical Support	Webmail Users Maintenance Notice
Date: Two Weeks Ago	
Service Monitor	Alert - Information in your credit report has changed
Passport Renewal	Renew Passport if applicable #12291217

Phishing (continued)

FROM	SUBJECT	RECEIVED	SIZE
Qaynh Nga	Hello,	Mon 3/28/2016 3:...	3 KB
Qatar Foundati...	Re: Donation(€950,000.00 EURO)	Mon 3/28/2016 12...	2 KB
Date: Last Week			
Anita Kone	Dearest one	Sat 3/26/2016 11:...	9 KB
Payanywhere	Urgent Action Needed: Confirm your PayAnywhere Account	Sat 3/26/2016 4:5...	10 KB
Walmart	MEGA-Rollbacks for spring! Plus, get our app.	Sat 3/26/2016 7:1...	109 KB
Walmart	Jeans from \$6.92. TVs from \$319. Rollbacks on mattresses.	Fri 3/25/2016 8:32...	107 KB
IRS.gov	Your Service Will be Suspended	Thu 3/24/2016 8:4...	3 KB
Genevieve Patt...	FW: Payment Receipt	Thu 3/24/2016 5:4...	16 KB
FedEx SmartPost	Delivery Notification, ID 00000398050	Thu 3/24/2016 2:5...	13 KB
COSTCO	minniti.cpa COSTCO reward - Open immediately!	Wed 3/23/2016 4:...	2 KB
Kmart	Job Offer	Sun 3/20/2016 4:4...	3 KB
Walmart	It's Game Time! Hurry and save big.	Sun 3/20/2016 8:1...	110 KB
mrs lillian	can you handle this project	Sun 3/20/2016 3:4...	4 KB
Date: Two Weeks Ago			
COSTCO	COSTCO reward - Open immediately!	Sat 3/19/2016 9:0...	2 KB
Jamie Kossler	Amazon: Add code #23863402 to your order	Fri 3/18/2016 8:28...	14 KB
Andrew Shafer	Add code #12062839 to your Amazon order	Thu 3/17/2016 1:5...	14 KB
Michael Cavan...	Can you give me a call?	Wed 3/16/2016 11:...	4 KB
Walmart	*ROLLBACKS*	Tue 3/15/2016 10:...	116 KB
FRANK MAHAMA	CRUDE OIL SUPPLY CONTRACT	Mon 3/14/2016 9:...	4 KB
mborasky@aol...	Time sensitive	Sun 3/13/2016 9:0...	4 KB

Phishing (continued)

The 6/2/2016 11:43 AM
 Invoices Dept <invoices.dept@outlook.com>
 The Arizona Society of CPAs Membership Past Due

Dear CPA:

Our records indicate that your membership fees are past due.

Your privileges as a member of The Arizona Society of CPAs will be terminated if payment is not received by the final due date.

You can download a copy of your invoice at the secure link below.

[invoice422349.pdf](#)

Thank you for your prompt attention to this matter.

Sincerely,

Cindie Hubiak
 President / CEO
 The Arizona Society of CPAs

 This document and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error, please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee, you should not disseminate, distribute or copy this email.

Phishing (continued)



Mon 2/22/2016 6:44 AM
IRS <ajd100@earthlink.net>
Your e-services will be suspended

To

i Links and other functionality have been disabled in this message. To turn on that functionality, move this message to the Inbox.
We converted this message into plain text format.

We have detected some suspicious activities with your e-service and we were unable to verify your PTIN for the 2015-2016 filing season.

To avoid future difficulties with Internal Revenue Services please kindly follow the given instructions below.:

[https://la2.www4.irs.gov/pub/rup_login_1?TYPE<http://ssctbdn.org/irs/la2.www4.irs.gov/>](https://la2.www4.irs.gov/pub/rup_login_1?TYPE=http://ssctbdn.org/irs/la2.www4.irs.gov/)

Note: Once you provide the correct the correct details asked . Your e-Services activities will continue.

Internal Revenue Service
e-Services

Phishing (continued)



bob@minnitcpalc.com | bob@minnitcpalc.com

Reminder - We're concerned about potential unauthorized activity

i If there are problems with how this message is displayed, click here to view it in a web browser.

PayPal

Dear customer,

We're concerned about potential unauthorized activity

After you confirm your identity, we'll walk you through steps to make your account more secure.

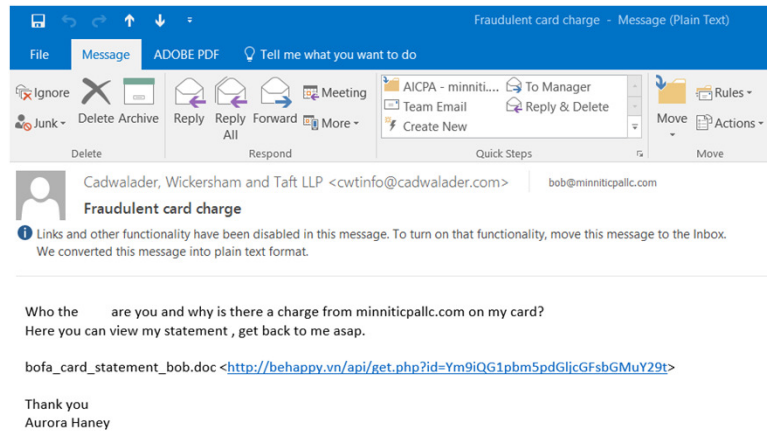
[Continue](#)

To help protect your account we regularly

Please do not reply to this email. We are unable to respond to inquiries sent to this address.

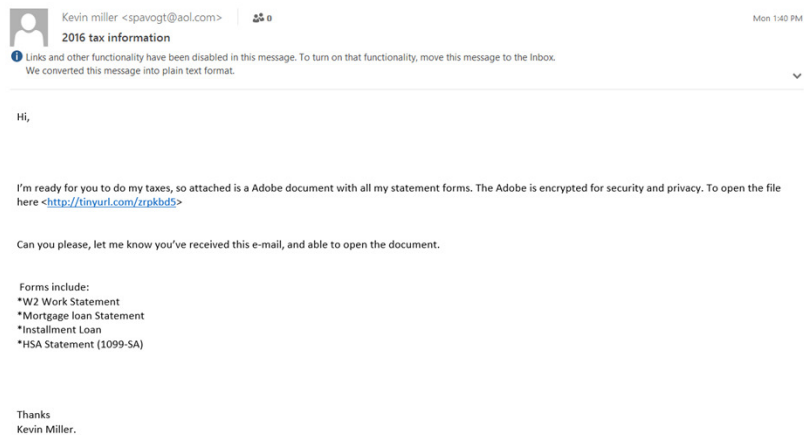
Copyright 1999-2017 PayPal. All rights reserved.

Phishing (continued)



71 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Phishing (continued)



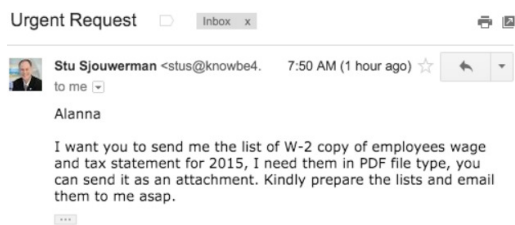
72 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Spoofing

- Fraudulent email activity in which the sender's address or other parts of the email header are altered to appear as though the email originated from a different source.
- Commonly used by spammers to hide the origin of an email.

73 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Spoofing example



<https://www.knowbe4.com/>

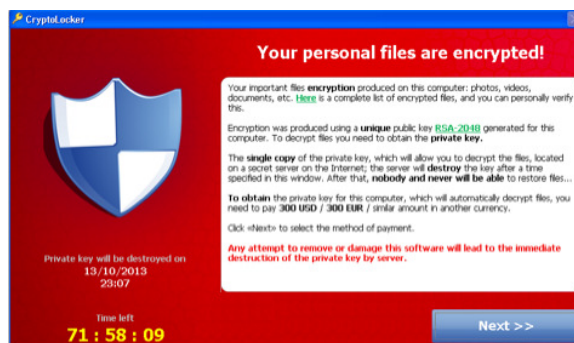
74 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Ransomware

- Ransomware is placed on computers to encrypt a victim's data until a ransom is paid for the decryption key.
 - Lock Screen Ransomware
 - Encryption Ransomware
 - Time Bomb Ransomware

The FBI estimates that ransomware is a \$3 billion a year fraud.

Ransomware (continued)



Ransomware (continued)

- Reveton installs itself onto the computer without the user's knowledge.
- The computer freezes.
- A bogus message from the FBI pops up on the screen saying the user violated federal law.
- To unlock their computer, the user must pay a fine.

<https://www.fbi.gov/audio-repository/news-podcasts-thisweek-reveton-ransomware/view>

Ransomware (continued)

THE FBI CYBER DEPARTMENT FEDERAL BUREAU OF INVESTIGATION

All activities of this computer have been recorded
All your files are encrypted. Don't try to unlock your computer!

Your browser has been blocked due to at least one of the reasons specified below.

You have been subjected to violation of Copyright and Related Rights Law (Video, Music, Software) and illegally using or distributing copyrighted contents, thus infringing Article 1, Section 8, Clause 8, also known as the Copyright of the Criminal Code of United States of America. Article 1, Section 8, Cause 8 of the Criminal Code provides for a fine of two to five hundred minimal wages or a deprivation of liberty for two to eight years.

You have been viewing or distributing prohibited Pornographic content (Child Porno photos and etc were found on your computer). Thus violating article 202 of the Criminal Code of United States of America, Article 202 of the Criminal Code provides for a deprivation of liberty for four to twelve years.

Illegal access has been initiated from your PC without your knowledge or consent, your PC may be infected by malware, thus you are violating the law on Neglectful Use of Personal Computer. Article 210 of the Criminal Code provides for a fine of up to \$100,000 and/or deprivation of liberty for four to nine years.

Pursuant to the amendment to Criminal Code of United States of America of May 28, 2011, this law infringement (if it is not repeated - first time) may be considered as conditional in case you pay the fine of the States.

To unlock your computer and to avoid other legal consequences, you are obligated to pay a release fee of \$300. Payable through GreenDot MoneyPak (you have to purchase MoneyPak card, load it with \$300 and enter the code). You can buy the code at any shop or gas station. MoneyPak is available at the stores nationwide.

How do I pay the fine to unlock my PC?

Your IP:
Location:

SECURE PAYMENT FORM

Enter the code MoneyPak

Please enter MoneyPak code using pin pad below.

1 2 3 4 5 6 7 8 9 0 Clear

UNLOCK YOUR PC NOW!

Ransomware (continued)

- The ransom initially requested on a single are small.
- Once the deadline has passed, the price increases significantly.

<https://www.knowbe4.com/>

79 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Ransomware (continued)

- Typical ransomware software uses RSA 2048 encryption to encrypt files.
- An average desktop computer is estimated to take around 6.4 quadrillion years to crack an RSA 2048 key.

<https://www.knowbe4.com/>

80 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Ransomware (continued)

- Scareware (Pop-ups)
- PC Cyborg (1998)
- TeslaCrypt (Gamers)
- Locky (Email)
- Wannacry (Windows flaw)

81 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Ransomware (continued)

- On August 9, 2016, the FBI changed its position on paying the bitcoin ransom to the cyber criminals.
- Supervisory special agent for the FBI's Cyber Division, Will Bales, said that businesses or individuals targeted by ransomware should refuse to pay the ransom.
- The U.S. Department of Justice stated there are approximately 4,000 ransomware attacks daily in the United States.

82 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Hacking

- Hacking is done by placing malware onto your computer system.
- Computers are commonly the targets of hackers.
- Hackers are starting to go after robots and automated production equipment.
- Hackers access systems through the “Internet of things.”

83 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Mobile malware

- Criminals use charging stations in public places to load malware onto mobile devices.

84 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Malvertising

- Criminals convince ad networks that they are legitimate businesses.
- Criminals attach malware to ads that appear on legitimate websites so that when the ads are opened, the malware is placed on the victim's computer.

www.knowbe4.com/

85 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Cell phone spyware

- Popular versions of spyware for cell phones
 - HighsterMobile
 - Spyera
 - Spyrix
 - FlexiSpy
 - Mobile Spy
 - MobiStealth
 - mSpy

86 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Other spyware

- Popular versions of other types of spyware
 - Keylogger
 - Win-Spy
 - Spytech Spy Agent
 - SpectorSoft
 - 007 Spy Software

87 © 2019 Association of International Certified Professional Accountants. All rights reserved.

Questions, Wrap-Up, and
Key Points/Lesson Review

© 2019 Association of International Certified Professional Accountants. All rights reserved.

**Thank you for being here today! I
enjoyed it!!**

Mark Conine, CPA
President, Arkansas Development Finance Authority
mark.conine@arkansas.gov