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Diane Matson

University of St. Thomas, Minnesota, dmmatson@stthomas.edu

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Independent Studies in Forensic Accounting: Some Practical Ideas

*Diane M. Matson**

Forensic accounting is a discipline that combines knowledge and skill from accounting, auditing, loss prevention, and law enforcement. Forensic accountants prevent and detect financial fraud. Fraud involves an intentional misstatement, knowledge of that misstatement, and intent to deceive. Forensic accounting has to do with an investigation and preparing documents and records for possible legal action in the judicial system, including a trial in a court of law. Fraud investigations may be viewed as broader than forensic accounting, but usually involve some forensic accounting.

There are many career opportunities in fraud auditing, forensic accounting, and fraud investigations. People with different professional backgrounds are involved in these careers. For example, accountants, auditors (internal and external), attorneys, police investigators, and private investigators may all be involved with forensic accounting and fraud investigations. While one course in forensic accounting is not enough background to prepare students to be forensic accountants, it can give them an introduction to and an appreciation for topics and techniques found in forensic accounting. Students may decide to pursue more coursework and to obtain practical experience in this area, and possibly to study for a certification such as the Master Analysts in Financial Forensics (MAFF), Certified Financial Forensics (CFF), Certified Forensic Accountant CrFA), or Certified Fraud Examiner (CFE).

Growth in Demand for Forensic Accountants

Forensic accounting is a growth area in accounting. The auditing and accounting scandals in the late 1990s and early 2000s brought attention to the devastation that financial fraud can bring. In particular, the scandals at Enron and WorldCom, the demise of Arthur Andersen, the collapse of investment banks, and the passage of the Sarbanes-Oxley Act all contributed to a growing awareness of fraud and fraudulent financial reporting (McMullen and Sanchez, 2010).

One observer noted the “financial crisis devastated many industries but continued to create opportunities for firms and professionals in forensic accounting” (Tysiac, 2012, p. 1). Increased financial regulation and strong demand for investigative services suggests that people with forensic accounting skills will continue to be in demand. Revenue in forensic accounting services, in the United States, is expected to grow 6.8% annually from \$4.3 billion in 2012 to \$6.0 billion in 2017 (Tysiac, 2012).

The majority of respondents in a study conducted by Seda and Kramer (2014) felt that the demand for forensic accountants will increase in the foreseeable future; ninety-four percent felt that the demand for forensic accountants would increase in the next ten years (Seda and Kramer, 2014, p. 39). Only twenty-five percent of respondents felt that there will be enough forensic accountants available to meet the demand in the next ten years. In an American Institute of Certified Public Accountants (AICPA) survey, two out of three CPAs reported their forensic practices have grown over the past year (AICPA, 2008). A leading practitioner, Ralph Summerford, sees a growing need for accountants with fraud examination skills. He states, “If you are combatting and working against fraud, business is good” (Cohn, 2014, p. 1).

* The author is an Associate Professor at University of St. Thomas.

College and University Course Offerings

The growing awareness of fraud in the business world has encouraged some colleges and universities to offer a course or courses in forensic accounting. Seda and Kramer (2014) state: “The primary catalyst for this call for forensic accounting education was the number of widely publicized corporate fraudulent financial reporting scandals, such as Enron and HealthSouth. Given that the estimated frequency of fraud occurrences reported by international fraud surveys supports that fraud remains a serious global problem, today’s accounting students—the world’s future accountants and auditors—must be educated on various forensic accounting topics” (Seda and Kramer, 2014, p. 3).

The findings of the Association of Certified Fraud Examiners (ACFE), in its recent *Report to the Nations*, reveal the pervasiveness and significance of fraud. This survey estimates that a typical organization loses five percent of revenues each year to fraud, which, if projected globally, translates into a fraud loss of nearly \$3.7 trillion. Individual organizations can be harmed, with a median loss of \$145,000 reported across organizations. The findings of this report support additional training and education in forensic accounting, in that accountants could improve their abilities to detect frauds. Tips initially detect 42.2% of frauds, while 14.1% are found by internal audit, 6.8% are found by accident, and three percent are found by external audit (ACFE, 2014).

Seda and Kramer (2014) point out, “for well over a decade, accounting leaders have been calling for educators all over the globe to provide accounting students with knowledge about fraud and other forensic accounting services, teaching them how to prevent, detect and investigate fraud as well as how to perform business valuations, litigation support and expert witnessing services” (Seda and Kramer, 2014, p. 1).

Seda and Kramer reviewed the websites of 1,086 colleges and universities in the United States and several foreign countries to determine the extent to which these institutions offered forensic accounting courses. Of these schools, forty-two percent (452 out of 1,068) did not offer forensic accounting classes, while fifty-eight percent (634 out of 1,068) offered one or more forensic accounting classes. Of the 634 colleges and universities that offered one or more courses, the researchers found that 447, or seventy-one percent, offer only one such course. The other 187 colleges and universities in this group of 634, or twenty-nine percent, provided more extensive offerings, such as forensic accounting certificates, degree programs, concentrations, minors, tracks or specializations.

Assuming a college or university offers one or more forensic accounting courses, the question may arise of what topics to cover in the only forensic accounting course, or in the first forensic accounting course. This decision will vary across colleges and universities. However, a study by Rezaee, Crumbley, and Elmore (2004) can provide some guidance here. These researchers surveyed two groups, accounting academicians and practicing CPAs, to assess the relative importance of topics related to forensic accounting education (among other issues). Both groups rated “fundamentals of fraud” as highest in importance, and “financial statement fraud” as second highest in importance. The academicians rated “types of fraud” as third highest, while the practitioners rated this as eighth highest. Both groups rated “cooking the books and problems in accounting” as fourth highest (Rezaee, Crumbley, and Elmore, 2004, pp. 210-211). These four important topics are addressed to some extent in the syllabus and assignments for this independent study course (See Appendix A).

Employers of Forensic Accountants

Forensic accountants are employed by many different organizations. Employers include government agencies and departments at the federal, state and local levels, accounting firms, consulting firms, law firms, insurance companies and retail stores. It is certainly true that one two-credit course in forensic accounting is not going to turn a student into a forensic accountant. However, I have heard from various employers that they like their job candidates to have at least some exposure to forensic accounting. Additionally, a few of my students have gone into careers in forensic accounting. They used the independent study course as a foundation for further coursework and practical experience.

Reasons for Independent Study

As previously discussed, some colleges and universities regularly offer courses in forensic accounting as a required or elective course in their undergraduate or graduate programs. Seda and Kramer (2014) found that forty-two percent (452 out of 1,068) of the colleges and universities they surveyed did not offer forensic accounting classes, while fifty-eight percent (634 out of 1,068) offered one or more forensic accounting classes. At my university, we do not require a forensic accounting course, because our accounting curriculum already is so full. The accounting majors complete eight accounting courses along with other required business and liberal arts courses. We do not offer a slate of elective courses—again, because the curriculum is so full that many students would not take them. In a sense, the way in which we offer elective courses is through an independent study class. The student expresses an interest and finds a professor to work with on a particular topic, in this case, forensic accounting.

Practically speaking, some students take this two-credit course because it is a two-credit course. They may be on their way to earning additional credits to meet the 150-credit requirement for either taking the CPA exam, or for becoming certified or licensed. Given that most if not all of their other courses at this university are four-credit, they are looking for a two-credit course to “get them” to 150 credits. Such students like that fact that this independent study course shows as an accounting course on their transcripts; they want at least some additional credits to be relevant to their accounting major. They may find that this independent study in forensic accounting is a good choice.

In addition, some students take this course because they do want to become forensic accountants, or because they want to obtain some of the knowledge and skills possessed by forensic accountants. As already mentioned, one course in forensic accounting is not enough to turn them into forensic accounting professionals, but might get them interested in pursuing more coursework and obtaining relevant experience. Such knowledge and skills would also be useful to accountants working in independent or internal auditing, tax accounting, or financial reporting.

In this paper, I am presenting this course as a two-credit course. However, an instructor could easily add to or modify the assignments to design a three-credit or a four-credit course.

Prerequisites

Because this course is individualized, I can work with students at various points in their undergraduate or graduate coursework. Most of my students have been undergraduate accounting majors, but a few have been graduate students. Of the graduate students, most have been pursuing the accounting track. However, one of my graduate students was pursuing a masters in engineering while employed as a police officer; he hoped to (and did) become a fraud investigator. Some students have taken the auditing course; if so, they would have studied the fraud triangle and internal controls, for instance, topics that also appear in forensic accounting. If students have not taken the auditing course, I can adjust the readings and discussions to provide more coverage of these topics. The only prerequisite that I require is the introduction to financial accounting course, as some knowledge of the accounting cycle and financial statements is very useful.

Ideas and Materials

Methods

Because an independent study is flexible, a professor may consider using many different sources of information. I tend to use more videos with independent study students than with students in a regular classroom. The independent study students will watch the videos on their own, outside of the meetings. My assignments include: 1) reading textbooks; 2) finding and summarizing examples of actual cases; 3) viewing videos; 4) building and interpreting financial profiles; and 5) writing a research paper.

Topics

There are many topics that could be covered in an independent study in forensic accounting. However, I have found that the following topics provide a good foundation. They are: 1) types of fraud; 2) types of evidence; 3) preventing, detecting and investigating fraud; 4) financial statement fraud; 5) misappropriation of assets fraud; 6) fraud triangle; and 7) internal controls.

More on Research Paper

The research paper offers the student a chance to investigate an actual fraud at a real organization. I require that the research be done with public information, which, practically speaking means the students research fraudulent activity at publicly-traded companies. The Securities and Exchange Commission website is an excellent starting point, and it can be supplemented with general on-line searches and university databases. Students have written papers on: Tyco; WorldCom; HealthSouth; Flight Transportation; Lehman Brothers; Bernie Madoff; Tom Petters; Adelpia Communications Corporation; and Xerox. The keys to a successful research paper are publicly-available information and resolution (at least partially) of the case.

A student chooses the topic for his or her paper, and checks with me before starting it. I provide suggestions as needed. A student may be interested in a particular industry, and the paper is a great way for the student to learn more about that industry by investigating a fraud in that industry. For example, a student who also is a pilot wrote on Flight Transportation. Another student interested in health care reported on HealthSouth.

The requirements for the research paper are:

1. Discuss the background, history and operations of the company.
2. Identify the influential people in the company.
3. Discuss the accounting problem(s) that caused the fraud in the company.
4. Identify how the fraud could have been discovered, if someone had been looking.
5. Discuss the internal controls that could have prevented the fraud.
6. Discuss the auditing problem(s) that led to the fraud in the company, or that made it more difficult to find the fraud.
7. Discuss the consequences to the company, the people involved at the company, and other stakeholders.
8. Include the fraud triangle in the discussion, and include comments about motivation, opportunity and rationalization.

Materials Included

Appendix A includes a sample syllabus and ten assignments. The assignments involve learning terms and concepts relating to fraud, finding examples of various types of fraud and summarizing these, applying the fraud triangle, viewing two videos and reflecting on the individuals and situations, analyzing a fraud in another country, building financial profiles, considering data analytics and interviewing, and writing a final research paper. The syllabus and assignments could be easily adapted to add, change, or remove content. In addition, the materials and solutions are available electronically from the author upon request.

Conclusion

Although more colleges and universities are offering one or more forensic accounting courses on a regular schedule than in the past, some schools may not be able to do this. In these situations, students may want to study forensic accounting as an independent study, working with professors on an individual basis. These students might want to become forensic accountants, or to obtain some forensic accounting skills which would be useful in independent or internal auditing, tax accounting, or financial reporting. This article provides a possible starting point to professors as they start offering such independent studies.

Works Cited

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Class Schedule

Class Topics, Reading, and Homework

Week 1 Reading <u>Forensic and Investigative Accounting</u> Chapter 1: Introduction to Forensic and Investigative Accounting Chapter 2: Forensic Accounting Education, Institutions, and Specialties Homework Assignment 1
Week 2 Reading <u>Forensic and Investigative Accounting</u> Chapter 3: Fraudulent Financial Reporting Chapter 4: Detecting Fraud in Financial Reporting Homework Assignment 2
Week 3 Video or DVD <i>Corporate Con</i> (Different Types of Fraud) Homework Assignment 3
Week 4 Reading <i>ACFE Report to the Nations on Occupational Fraud and Abuse (2014)</i> Homework Assignment 4
Week 5 Reading Legal Proceedings against Satyam Computer Services Homework Assignment 5
Week 6 Reading <u>Forensic and Investigative Accounting</u> Chapter 5: Employee Fraud: The Misappropriation of Assets Chapter 6: Indirect Methods of Reconstructing Income Homework Assignment 6
Week 7 Reading <u>Forensic and Investigative Accounting</u> Chapter 6: Indirect Methods of Reconstructing Income Homework Assignment 7
Week 8 Reading <u>Forensic and Investigative Accounting</u> Chapter 9: Proper Evidence Management Chapter 15: Cybercrime Management: Legal Issues Homework Assignment 8
Week 9 Video <i>The Smartest Guys in the Room</i> (Fraud at the Enron Company) Homework Assignment 9
Week 10 Reading Articles on Data Analytics and Interviewing Skills Homework Assignment 10
Week 11-12 Work on Paper
Week 13 Paper Due

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 1

This assignment is worth 40 points. Read the specified chapters in *Forensic and Investigative Accounting* 7th edition, by Crumbley, Heitger, and Smith. The responses should be prepared with word processing. Some answers will be short, but please use complete sentences, proper spelling and correct grammar.

Read Chapters 1 and 2. Answer these questions from the back of each chapter.

Part A.

Chapter 1

Question 1.

Question 2.

Question 3.

Question 4.

Question 16.

Question 30.

Question 34.

Part B.

Chapter 2

Question 6.

Question 11.

Question 17.

Question 43.

Part C.

Find the website for the Federal Bureau of Investigation (FBI). What types of financial crimes does the FBI investigate? Why does the FBI employ forensic accountants? List and discuss three ways in which forensic accountants help the FBI solve crimes.

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 2

This assignment is worth 40 points. Read the specified chapters in *Forensic and Investigative Accounting* 7th edition, by Crumbley, Heitger, and Smith. The responses should be prepared with word processing. Some answers will be short, but please use complete sentences, proper spelling and correct grammar.

Read Chapters 3 and 4. Answer these questions from the back of each chapter.

Part A.

Chapter 3

Question 13.

Question 14.

Question 15.

Question 19.

Question 29.

Question 42.

Question 47.

Part B.

Chapter 4

Question 5.

Question 8.

Question 9.

Question 13.

Question 17.

Question 18.

Question 19.

Question 32.

Question 33.

Question 38.

Part C.

Do an Internet search. Find a case involving inventory fraud. Describe what happened. Discuss how this fraud could have been discovered by auditors or forensic accountants. Use some of the ideas from the chapters. Attach the printout.

ACCT XXX: Independent Study in Forensic Accounting

Semester 20XX

Assignment 3

This assignment is worth 40 points. The responses should be prepared with word processing. Some answers will be short, but please use complete sentences, proper spelling and correct grammar.

View the video, *Corporate Con.* Your professor will make this video available. It is a video from the Association of Certified Fraud Examiners. This video includes interviews with several people involved with financial frauds. Answer the following questions.

Tony

1. What type of fraud did Tony perpetrate? How did it work? How much was taken (if this information is in the video)?
2. What was his motivation?
3. What was his opportunity?
4. What was his rationalization?
5. How was the fraud detected?
6. What were the consequences to Tony?

Eddie

1. What type of fraud did Eddie perpetrate? How did it work? How much was taken (if this information is in the video)?
2. What was his motivation?
3. What was his opportunity?
4. What was his rationalization?
5. How was the fraud detected?
6. What were the consequences to Eddie?

Paul

1. What type of fraud did Paul perpetrate? How did it work? How much was taken (if this information is in the video)?
2. What was his motivation?
3. What was his opportunity?
4. What was his rationalization?
5. How was the fraud detected?
6. What were the consequences to Paul?
7. Do you think Paul is sorry for what he did? Why or why not?

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 4

This assignment is worth 40 points. The responses should be prepared with word processing, double-spaced. Although some of the answers may be short, please use complete sentences. Check for proper grammar and correct spelling. Page numbers are useful.

Refer to the document, *ACFE Report to the Nations on Occupational Fraud and Abuse (2014)*. This document can be found at: <http://www.acfe.com/rtnn.aspx>

Answer the following questions.

1. What are the three major types of occupational fraud and abuse? Please give these definitions.
2. Can the costs of occupational fraud and abuse be measured accurately? Why or why not?
3. Give the definition of a specific type of asset misappropriation, check tampering. Consider a small business. How could someone in a small business do this? (Think of a possible example). Why might this be a concern for a small business?
4. What is the frequency of check tampering, relative to all occupational fraud schemes in the United States? How long does it take to detect a check tampering scheme (the median in months)?
5. What is the most likely way a fraud is discovered?
6. What anti-fraud control is the most effective in reducing losses? Is this particular control common in organizations? Consider this control in smaller businesses and larger businesses.
7. What is the main control weakness that leads to fraud? Briefly comment on why this weakness could lead to fraud.
8. Consider the perpetrators. Briefly summarize how age, gender and educational level affect the likelihood of being involved in a fraud. Also, speculate on why these factors are important. For example, why might the age of the perpetrator matter? What about gender and educational level? (Four paragraphs might be adequate here).
9. What is meant by behavioral red flags? What are three examples?

ACCT XXX: Individual Study in Forensic Accounting

Semester 20xx

Assignment 5

This assignment is worth 40 points.

You will learn about an actual fraud in another country. In addition, you will research the fraud in an official government proceeding, in this case, the Securities and Exchange Board of India. You will also find one other source on the internet relating to the punishment (in terms of financial penalties and/or a prison sentence) for the top executive.

Go to the Website of the Securities and Exchange Board of India. In particular, you will be accessing an “Order” relating to Satyam Computer Services Limited. This website is:

<http://www.sebi.gov.in/sebiweb/home/list/2/9/2/0/Orders-of-Chairman-Members>

Find the order dated July 15, 2014. This document is called:

Order in the matter of Satyam Computer Services Ltd. In respect of Mr. B. Ramaling Raju, Mr. B. Rama Raju, Mr. Vadlamani, Mr. G. Ramakrishna and Mr. V. S. Prabhakara Gupta.

Prepare a three to four page reflection on the case. Include these points in your reflection: (1) describe the industry and the business; (2) explain the significance of the letter; (3) identify the accounts that were seriously misstated, and the amounts of these misstatements; (4) apply the fraud triangle to this situation; and (5) describe the consequences to the top executive, Mr. Ramalinga Raju (the consequences would be financial penalties and/or a prison sentence).

This paper should be double-spaced, with proper grammar and spelling. Use page numbers. Be sure to give a citation for the “Order” and the other source of information you find.

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 6

This assignment is worth 40 points. Read the specified chapters in *Forensic and Investigative Accounting* 7th edition, by Crumbley, Heitger, and Smith. The responses should be prepared with word processing. Some answers will be short, but please use complete sentences, proper spelling and correct grammar.

Read Chapters 5 and 6. Answer these questions from the back of each chapter.

Part A.

Chapter 5

Question 11.

Question 17.

Question 26.

Question 27.

Question 31.

Question 56.

Part B.

Chapter 6

Question 8.

Question 9.

Question 13

Question 14.

Question 17.

Question 32.

Question 33.

Question 38.

Question 46.

Part C.

Do an internet search. Find a case involving fraud at a nonprofit organization. Describe what happened. Discuss how this fraud could have been discovered by auditors or forensic accountants. Use some of the ideas from the chapters. Attach the printout.

Part D.

Go to the website of the county in which you live. Do a “property information search” on a building, an address that you know. Find the owner, most current sales information, estimated market value and annual property taxes. Please attach the printouts.

How could this information be used by a forensic accountant?

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 7

This assignment is worth 40 points. It is related to Chapter 6 in *Forensic and Investigative Accounting* 7th edition, by Crumbley, Heitger, and Smith. There are two worksheets to complete for this assignment. Complete the assignments by hand or with Excel.

Indirect Methods of Proof—for an Individual Person or Family

a. Net Worth Method

Funds would be used to save, buy assets, pay debts, or just spend on personal items.

The idea is that the suspect is living beyond known sources of funds, and this analysis is similar to a balance sheet and income statement.

You need to have a reliable Prior Year's Net Worth; you must investigate leads suggesting the innocence of suspect, and you must establish a likely taxable source of income

Net Worth Method Formula

	Assets
Minus:	Liabilities
Equals:	Net Worth
Minus:	Prior Year's Net Worth
Equals:	Increase in Net Worth from Prior Year
Plus:	Known Expenses
Equals:	Total Net Worth Increase
Minus:	Funds from Known Sources
Equals:	Funds from Unknown Sources

b. Source and Application of Funds (Expenditures) Method

A variation of net worth analysis, any change in an account each year is analyzed similar to the statement of cash flows.

Source and Application of Funds (Expenditure) Method Formula

	Total Funds Applied
Minus:	Known Sources of Funds
Equals:	Funds from Unknown Sources

Example of a Net Worth Method and a Source and Application of Funds (Expenditure) Method

Mary Jones is a hypothetical person. Mary Jones operates a beauty salon in a small shopping center. There is some suspicion that this business is a front for illegal drug trafficking. Assume that you, as a forensic accountant working in law enforcement, have gathered some financial information and are going to prepare a net worth analysis. The base year (starting point) is 2013, and that information is presented on the next page. Here is the information for 2014 and 2015:

1. Mary reported net income from the beauty salon of \$55,000 in 2014 and \$60,000 in 2015.
2. Mary purchased a new house on July 1, 2014. The new house cost \$200,000. A \$25,000 down payment, in cash, was made. The remaining balance was financed with a mortgage loan. Each monthly payment on the mortgage is \$1,800 and payments began on July 1, 2014. The mortgage payments are interest only. Before purchasing the house, Mary rented a townhouse for \$1,000 a month.
3. Mary purchased some stock for the first time in 2014, paying \$6,000. In 2015, she purchased more stock, paying \$9,000.
4. Mary took a two-week vacation in 2015, to Italy, including a tour of wineries. The cost was \$9,000.
5. Mary sends her two children to a private school. The tuition for 2014 was \$11,000 and for 2015, \$12,000.
6. Mary leases a Lexus for \$500 a month. The lease was in effect in 2014 and 2015.
7. Other personal and living expenses (food, utilities, entertainment, clothing, insurance, etc.) were estimated at \$31,000 for 2014 and \$36,000 in 2015.
8. Mary purchased jewelry costing \$7,000 in 2014 and artwork costing \$10,000 in 2015.
9. As mentioned, Mary has two children. She is divorced and receives no alimony or child support from her former husband.
10. Mary received an inheritance from the estate of an uncle in 2014. The amount was \$25,000.
11. Mary had \$5,000 in personal cash on hand during 2014 and \$7,000 during 2015.
12. Mary had \$5,000 in a bank savings account during 2014 and 2015.

Net Worth Method			
Mary Jones			
	<u>Base Year</u>	<u>Year One</u>	<u>Year Two</u>
	<u>2013</u>	<u>2014</u>	<u>2015</u>
<u>Assets</u>			
Cash on Hand	\$3,000		
Savings Account	4,000		
Jewelry and Artwork			
?			
?			
Total Assets			
<u>Liabilities</u>			
Mortgage on Real Estate			
Total Liabilities			
Net Worth (TA - TL)			
Minus: Prior Year's Net Worth			
Equals: Increase in Net Worth from Prior Year			
Plus: Known Expenses/Expenditures			
Mortgage Payment (Interest Only)			
Total Known Expenses			
Equals: Total Net Worth Increase			
Minus: Funds from Known Sources			
Total Funds from Known Sources			
Equals: Funds from Unknown Sources			

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 8

This assignment is worth 40 points. Read the specified chapters in *Forensic and Investigative Accounting* 7th edition, by Crumbley, Heitger, and Smith. The responses should be prepared with word processing. Some answers will be short, but please use complete sentences, proper spelling and correct grammar.

Read Chapters 9 and 15. Answer these questions from the back of each chapter.

Part A.

Chapter 9

Question 1.

Question 3.

Question 4.

Question 5.

Question 6.

Question 8.

Question 15.

Question 22.

Question 39

Part B.

Chapter 15

Question 2.

Question 4.

Question 5.

Question 11.

Question 17.

Part C.

Do an Internet search. Find a case involving a cybercrime, one in which the perpetrators were after a financial gain. Describe what happened. Discuss how this fraud was detected. What advice would you give someone who wanted to avoid this type of crime? Attach the printout.

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 9

This assignment is worth 40 points. The responses should be prepared with word processing.

Please read “The Fall of Enron” at <http://www.npr.org/news/specials/enron/>. Then, watch the movie, *The Smartest Guys in the Room*. You could order this from Netflix or IMDb, or your instructor will make the DVD available.

Write a two-page reflection on the Enron fraud. What do you think of Mr. Lay’s role? Do you believe the auditors did an adequate audit? Comment on the “tone at the top.” What can we learn from this fraud?

This paper should be double-spaced, with proper grammar and spelling. Use page numbers. Be sure to give citations for the two sources of information.

ACCT XXX: Independent Study in Forensic Accounting

Semester 20xx

Assignment 10

This assignment is worth forty points. This will cover two important topics, data analytics and interviewing skills. You will read two articles about data analytics and one article about interviewing skills. Then, you will answer multiple choice questions about each topic.

Part A.

Data Analytics

A forensic accountant may apply data analytic techniques to identify important connections, relationships and patterns in a large amount of data. Please find these two articles through your university's library databases:

McGinty, Jo Craven. (2014). Accountants Increasingly Use Data Analysis to Catch Fraud. *The Wall Street Journal*. (December 5, 2014).

Rosenbush, Steve. (2013). Visa Says Big Data Identifies Billions of Dollars in Fraud. *CIO Journal*. (March 11, 2013).

Questions

1. What is true about the predictions made by Benford's Law? Assume you are looking at a series of numbered documents.
 - a. more numbers should start with one than with nine
 - b. more numbers should start with eight than with two
 - c. numbers should start with digits in a random pattern
 - d. numbers should not follow any pattern
2. A useful application of Benford's Law is:
 - a. determining the guilt or innocence of a suspect
 - b. showing that data analytic techniques have been used
 - c. explaining that numbers are meaningful
 - d. identifying possibly fraudulent documents
3. Visa is concerned about network security because of:
 - a. criminal gangs that operate online
 - b. losses caused by fraudulent purchases
 - c. merchants who accept questionable prepaid cards
 - d. all of the above
4. Visa believes that:
 - a. focusing on a few attributes of credit card transactions is sufficient
 - b. \$0.06 of every \$100.00 in credit card transactions is fraudulent
 - c. powerful detection techniques based on Big Data will eliminate credit card fraud
 - d. ten percent of customers are using false, fraudulent or stolen credit cards
5. Which one of the following combination of items would most suggest possibly fraudulent purchases?
 - a. cell phones and jewelry
 - b. big screen TVs and prepaid cards
 - c. sporting equipment and toys
 - d. DVDs and printer cartridges

6. Suppose a credit card company noticed that the billing address and the shipping address for a purchase are different. The credit card company:
 - a. would not care, as long as it got paid
 - b. would assume that a mistake has been made, and would send the product to the billing address
 - c. would assume that the cardholder has two residences
 - d. would consider the possibility that a stolen credit card had been used for the purchase
7. In the future, analytical techniques using Big Data will not:
 - a. analyze many aspects of a transaction
 - b. identify suspicious behavior
 - c. treat all merchants the same
 - d. authenticate credit card users
8. Which situation would be of least concern to a credit card company trying to minimize fraud?
 - a. using a newly opened credit card, Frank purchases many prepaid credit and phone cards
 - b. Myrtle uses her credit card for both online and in-store purchases
 - c. Howard has his purchases shipped to Texas and his bill (statement) sent to New Hampshire
 - d. Annie has used her credit card often in the past month, after barely using it for five years

Part B.

Interviewing Skills

A forensic accountant will likely participate in interviews with witnesses and suspects. Please find this article:

American Institute of Certified Public Accountants. (undated). Conducting Effective Interviews. Available at:

http://www.aicpa.org/InterestAreas/ForensicAndValuation/Resources/PractAidsGuidance/DownloadableDocuments/10834-378_interview%20whiite%20paper-FINAL-v1.pdf

Questions

1. The main purpose of interviewing in a forensic engagement is:
 - a. to add to the documentation related to the case
 - b. to interrogate suspects and witnesses
 - c. to obtain a confession
 - d. to gather evidence and other information provided by witnesses
2. The main difference between an interview and an interrogation is:
 - a. the extent of force and confrontation
 - b. the innocence or guilt of the people involved
 - c. an interrogation is illegal
 - d. how many suspects are in the interview room
3. An effective interview will likely not include:
 - a. proper planning
 - b. relevant questions
 - c. biased interviewers
 - d. active listening
4. Which activity is recommended in a forensic interview?
 - a. the interviewers sit in front of the door inside the interview room
 - b. the interviewers talk on their cell phones
 - c. original documents, not photocopies, are shown and discussed
 - d. only one person is interviewed at a time
5. Why should a forensic accountant suggest that clients secure their data?
 - a. a suspect may erase computer files
 - b. a witness may be confused by documents
 - c. the client may not have experienced a fraud previously
 - d. the forensic accountant will want to keep all the data
6. If possible, generally speaking, _____ should be interviewed before _____.
 - a. law enforcement officers clients
 - b. witnesses suspects
 - c. suspects witnesses
 - d. clients law enforcement officers
7. The most ideal situation in a forensic interview is to have:
 - a. two interviewers and two suspects
 - b. one interviewer and one suspect
 - c. two interviewers and one suspect
 - d. one interviewer and two suspects

8. Assume the client is ABC Company; Carl is the attorney for ABC; Beth is the Chief Financial Officer for ABC. Todd and Mary are the outside forensic accountants hired by ABC to investigate a cash shortage. Which statement best represents an *Upjohn* warning?
 - a. “Beth,” said Carl, “I’m here to represent ABC Company as in-house counsel.”
 - b. “Beth,” Carl stated, “I’m acting on behalf of ABC Company, but I also can give you some advice.”
 - c. “Beth,” Todd explained, “Carl might ask a few questions.”
 - d. “Beth,” Mary exclaimed, “You are under arrest!”
9. The best example of an informational question is:
 - a. “What about that football game?”
 - b. “What are your main duties as Vice-President of Finance?”
 - c. “Why did you steal the cash from the vault?”
 - d. “Do you want to go out to lunch?”
10. A forensic accountant is trying to conclude the interview. He/she should not:
 - a. leave a business card
 - b. create a hostile atmosphere
 - c. thank the people who were interviewed
 - d. summarize the facts