ISSUES IN ACCOUNTING EDUCATION
Vol. 26, No. 1
2011
pp. 201–217

American Accounting Association
DOI: 10.2308/iace.2011.26.1.201

Mountain State Sporting Goods: A Case of Fraud? A Case Study in Fraud Examination

Robert J. Rufus and William Hahn

ABSTRACT: This case, which is derived from an actual fraud occurrence, provides an opportunity for students to employ fraud theory and assess the three conditions generally present when fraud occurs, i.e., incentive, opportunity, and ability to rationalize. Specific applications include the major provisions of SAS No. 99 (American Institute of Certified Public Accountants [AICPA] 2002), e.g., professional skepticism, brainstorming, risk assessment, and communication of findings. The case is designed with a scientific perspective, proceeding through the five sequential steps of a fraud examination (validate the suspicion, create a hypothesis, test, refine, and communicate). The case also provides an opportunity for students to employ financial statement analysis, journal entry testing, indirect methods of income reconstruction, and other evidence-gathering techniques in a realistic context. Additional topics include business valuations, ethics, professional standards, types of engagements, internal control, agency theory, and alternative dispute resolution. This case is suitable for use in an upper-level undergraduate or graduate course in auditing or forensic accounting, as well as practitioner education.

Keywords: forensic accounting; fraud examination; fraud theory; scientific method; financial statement analysis; journal entry testing.

INTRODUCTION

Background Information

Organization and Ownership

Mountain State Sporting Goods (the "Company") is a Kentucky corporation organized by J. D. Smith in 1993. Following J. D.'s death on December 15, 2006, day-to-day management was assigned (via an employment contract, effective January 1, 2007) to Mr. Thomas A. Workman, a long-term employee and assistant manager under J. D. Ownership of the Company's stock was inherited equally (50/50) by J. D.'s two children—Robert and Nathaniel, both full-time college students (ages 18 and 19, respectively). During the administration of J. D.'s

Robert J. Rufus is the Director of The Forensic Institute, LLC, and President of Rufus & Rufus Accounting Corporation, and William Hahn is a Professor at Southeastern University.

We wish to thank Kent St. Pierre (past editor) and two anonymous reviewers for their valuable comments and observations. Special thanks are extended to Laura Savory Miller for her tireless efforts in the development of the case as a learning tool and Stacey Halloran for her efforts in converting the actual case data into teaching materials.

Editor's note: Accepted by Kent St. Pierre.

Published Online: February 2011

estate, the business was valued at $350,000[1] by a Certified Valuation Analyst (CVA), utilizing the capitalization of earnings method. Both the methodology employed and the value conclusion were considered reasonable by all parties, including the Internal Revenue Service (IRS) and Mr. Workman. The date of valuation was December 31, 2006.

Pursuant to the terms of his employment contract with the Company, Mr. Workman is required to facilitate the preparation of annual (audited) financial reports with supporting schedules and footnotes. Said financial reports are presented at the Company's annual Board of Directors (BOD) meeting. The Company files its annual federal income tax return as an S corporation via Form 1120S, wherein profits and/or losses flow to its shareholders.

The Company has one store, located at 33 Park Drive, Beaver Creek, Kentucky. This is the Company's second location since its inception. The move to the new location (on March 1, 2006) was managed by J. D. before his death and motivated by the addition of a new profit center—a pawn shop. The facility is leased from Black Oak Realty (an unrelated party), with an option-to-purchase at its appraised value ($240,000) at the end of the first three-year term.

According to J. D.'s projections, the new location and pawnshop activity would complement the Company's existing offerings and result in revenue growth of 10 percent in 2006, 15 percent in 2007, and 10 percent in each of the following three years. J. D.'s projections attributed 50 percent of the increased revenue directly to the pawn component. Importantly, any increase in profits was to be accumulated (in a sinking fund) to fund a 20 percent down payment on the building upon exercise of the purchase option. J. D.'s projections and actual results are presented in Table 1.

Products/Services

As of the date of valuation, the Company's offerings included a comprehensive selection of high-quality, competitively priced national and regional brand products. The merchandise mix was comprised of tobacco products, firearms, sporting equipment, and sporting apparel/footwear. As of July 1, 2006, the Company also offered short-term secured consumer lending (i.e., pawn shop).

According to the valuation report, the Company's various product categories were grouped into the five general categories presented in Table 2. As illustrated, during the 2006 calendar year,

TABLE 1

Gross Revenues
Projected versus Actual

Year	Projected Sales[a]	Actual Sales[b]	Projected Growth[a]	Actual Growth
2005	NA	$2,007,185	NA	7.72%
2006	$2,210,000	$2,195,901	10%	9.4%
2007	$2,541,500	$2,339,496	15%	6.54%
2008	$2,796,000	$2,513,479	10%	7.44%
2009	$3,075,500	NA	10%	NA
2010	$3,383,000	NA	10%	NA

[a] Source: J. D.'s business plan and supporting financial forecasts.
[b] Source: Financial Statements.

[1] $518,500 before application of a marketability discount (32.5 percent).

TABLE 2
Product Categories

	2005 Activity		2006 Activity		Avg.	
Department	**Sales %**	**GM**	**Sales %**	**GM**	**Sales %**	**GM**
Tobacco	43.10%	9.61%	40.43%	13.60%	41.76%	11.61%
Footwear	4.12%	44.85%	4.21%	35.77%	4.17%	40.31%
General SG	22.60%	20.15%	23.19%	20.46%	22.89%	20.31%
Guns/Ammo	23.49%	31.14%	22.55%	29.05%	23.02%	30.10%
Licenses	6.69%	4.45%	8.88%	7.74%	7.78%	6.10%
Pawn	NA	NA	0.73%	50.00%	NA	NA

Source: Valuation Report as of Dec. 31, 2006.

the smallest component (<1 percent) of the Company's revenues was pawn loans. The Company offers 30-day renewable loans at a periodic interest rate of 20 percent. Borrowers pledge a variety of items as loan collateral, including firearms, tools, and electronics.

The character of items pawned is summarized in Table 3. If interest charges are not paid within seven days of the end of each 30–day period, the collateral is seized and placed in inventory for resale. The Company's annual physical inventory *does not include* forfeited pawn items. Advances (pawn loans) are recorded as noninventoried purchases (versus receivables) and redemptions are recorded as sales (versus collections). These practices are not in conformity with GAAP, which would require the initial recording of a pawn loan receivable and a subsequent movement of the receivable to inventory when a pawn item is not redeemed.

According to Mr. Workman, the Company's average loan is $100, with an average redemption rate of approximately 65 percent. All loans must be repaid with cash, although checks are accepted for interest payments. According to the valuation report, there is no set policy for determining the amount of a pawn loan. However, following J. D.'s death, only Mr. Workman is permitted to price and approve a loan. Pricing information sources include Mr. Workman's product knowledge, retail prices, and Internet prices. Individual customer history is another factor, with established customers receiving higher loans than new customers.

TABLE 3
Pawn Items

Category	**% Revenues**
Jewelry	<1%
Firearms	80%
Tools	8%
Games and Game Systems	<1%
Electronics	5%
Other	5%

Source: Valuation Report as of Dec. 31, 2006.

Customer Service

According to Mr. Workman, the Company's competitive advantages are its convenient location, distinctive merchandise selection, and superior customer service, specifically a commitment to identifying and providing merchandise that is relevant to the targeted customer base.

Management

The Company was co-managed by Ms. Sue Bryant and Mr. Workman following J. D.'s death (December 15, 2006), until her retirement on January 6, 2007. Since that time, the Company has been managed by Mr. Workman pursuant to the terms of his employment contract. Robert and Nathaniel do not actively participate in management, but attend annual BOD meetings to review financial reports, which are prepared and presented by the Company's auditor (Charles Hess, CPA).

Officers' Compensation

According to Mr. Workman, his compensation is determined by his employment contract, which specifies a base salary of $50,000 plus 1 percent of all sales exceeding projections. To date, the Company has failed to meet these projections. A comparison of projected sales to reported sales is presented in Table 1.

Key Employees/Compensation/Benefits

The Company has an average of eight employees, including Mr. Workman's spouse (Anita) and his 17-year-old daughter (Mia). Anita and Mia share in-house accounting duties and responsibilities. Before J. D.'s death, these duties were performed by Sue Bryant, who retired shortly thereafter. No other key employees have been identified. The Company offers statutory benefits (e.g., Social Security, Workers' Compensation, SUTA, and FUTA), as well as one week of paid vacation. Only Mr. Workman receives health insurance benefits.

Significant Accounting Policies

Method of Accounting

The Company employs the accrual method of accounting. Under the accrual method, income is accounted for (recognized) when earned. It is not the actual receipt, but rather the *right to receive* that governs. Expenses are recognized as incurred, i.e., when all events have occurred that fix the amount of the item and determine the liability to pay. As explained by the Company's CPA (Hess), the IRS requires taxpayers that maintain inventories to employ the accrual method of accounting.[2]

Inventory Accounting

Inventory is usually the largest current asset of a business, and its proper measurement is necessary to ensure accurate financial statements. If inventory is not properly measured, expenses and revenues cannot be properly matched. When ending inventory is incorrect, the following balances on the balance sheet will also be incorrect as a result: inventory, total assets, and owners' equity. When ending inventory is incorrect, the cost of merchandise sold and net income on the income statement will also be incorrect.

The two most common inventory systems are the periodic and perpetual systems. Following J. D.'s death in December of 2006, the Company abandoned its perpetual system and converted to a *periodic inventory method*. Under this method, a purchases account is used and the beginning inventory is unchanged during the period (e.g., month, quarter, or year). At the end of an account-

[2] T. Reg. §1.446-1(c)(2).

ing period, the inventory account is adjusted by closing out the beginning inventory and recording the ending inventory, as determined by a physical inventory. The Company's current practice is to conduct a physical inventory at the end of each year, adjusting cost of goods sold (COGS) and ending inventory accordingly.

As presented by Mr. Workman, the perpetual system maintained by J. D. before his death was too complex, too time consuming, and simply not cost justified. Moreover, the Company's auditor did not object and, in fact, encouraged the change.

Method of Valuing Ending Inventory

The valuation of inventory can be a complex process that requires the determination of: (1) the physical goods to be included, (2) the costs to be included, (3) the cost flow assumption to be adopted, i.e., cost or lower of cost or market, and (4) the accounting cost flow assumption to be adopted, e.g., specific identification, LIFO, FIFO, or moving-average. The Company employs the FIFO cost flow assumption.

The Company includes in its physical inventory all items on premises (or in transit) for which it has legal title, with the exception of forfeited pawn items. The Company employs the lower of cost or market method in valuing its ending inventory, and items identified as unsellable due to obsolescence or condition are valued at *bona fide* selling prices (as determined by Mr. Workman).

Accounting Functions

Effective January 1, 2007, all accounting functions and day-to-day accounting activities have been processed by the Company's in-house personnel (Anita and Mia) and supervised by Mr. Workman, as the Company's manager. Annual financial reports and related income tax returns are prepared by Charles Hess, CPA.

Current Situation

Running the Company has become a Workman family affair. Mr. Workman serves as the GM, while Anita and Mia share duties as in-house accountants. During Mr. Workman's tenure as the Company's GM, he has purchased a new residence and two family automobiles. Moreover, he is rumored to have invested in an exotic vacation home with the Company's CPA, Mr. Hess.

During this same period, dividend distributions to J. D.'s children have been reduced to less than 25 percent of the amounts projected. In addition, the children are fearful of not having the money required (20 percent down payment) to purchase the building at the end of the lease term.

The Engagement

Following the presentation of the 2008 annual (compilation) report, Robert and Nathaniel engaged Mr. Dwane Peoples, a former federal prosecutor, to consider their concerns that Mr. Workman is committing fraud, i.e., stealing from the Company. Mr. Peoples subsequently engaged you as a *consulting expert* to assist in the evaluation and development of the case. To complete your assignment, you will proceed as follows:

1. Employing fraud theory (i.e., the fraud triangle) and professional skepticism, consider the circumstances that form a reasonable basis of the allegation(s) (i.e., suspicion of fraud).
2. Create a fraud hypothesis. Remember, a hypothesis is not a statement of fact—it is simply an educated guess about how something works or an explanation for an event. Brainstorming is recommended.
3. Test your hypothesis via financial statement and journal entry analysis.
4. Refine and confirm your hypothesis via fact gathering (e.g., interviews).

5. Draw your conclusion/s, and communicate your results. This challenge includes a determination of the amount of the "misappropriation" (if any) and a related discussion of the specific schemes employed. Included should be a discussion of Mr. Hess' role, duties, and responsibilities.

Having reviewed your analysis and conclusions, Mr. Peoples wants to *change* your engagement from a *consulting* to a *testifying* expert with the submission of an expert report. He has cautioned that your opinion(s) need to be stated in a legally sufficient manner and must be based upon reliable facts, data, and methodology. He has advised you that your report will be used in settlement negotiations and will be subject to examination by an opposing expert.

CASE LEARNING OBJECTIVES AND IMPLEMENTATION GUIDANCE

Overview

This case is based on an actual forensic accounting engagement. The names of the business, location, and individuals involved have been changed. For the purpose of our discussion, the business is located in a metropolitan area in Kentucky with a target market of roughly 60,000. Following the owner/founder's death, ownership transferred equally to two sons, neither of whom is active in day-to-day operations. The store is managed by a former employee, during whose tenure sales have failed to meet projections.

The students' challenge is to assist legal counsel retained by the current shareholders in the role of a *consulting* CPA who is an expert in forensic accounting. In this role, they must develop supporting evidence using ambiguous financial information.

Students are often uncomfortable with ambiguity in a classroom setting, especially accounting students. In most accounting classes, they are taught to expect a single best answer to an accounting problem, developed from "A" to "B" and then "C." This case provides a basis for teaching aspects of accounting ambiguity that will be encountered in the workplace, primarily in audit and forensic accounting careers.

Students are generally unschooled in using incomplete information to reconstruct financial records, as most accounting textbook problems seek solutions that are built logically, step by step, from a complete set of data. This case requires that students use their accounting knowledge to work backward, from known data, in order to reconstruct pro forma financial statements valuable to a prosecuting attorney (i.e., solve the issue by starting at "C" and moving backward). To accomplish this, the scientific method is employed. The five steps of the scientific method are tied to each Learning Objective (LO) described in the next subsection:

1. Ask questions and perform research—LO1
2. Construct hypotheses—LO1
3. Test hypotheses—LO2, LO3, and LO4
4. Analyze data and draw conclusions—LO5 and LO6
5. Communicate results—LO7

This case also introduces students to the value and challenge of interviewing witnesses, a forensic investigative tool used to gather information and refine/confirm a fraud hypothesis. As fact finders, students will move through the interview process and recognize the importance of planning and the questioning process. Moreover, students will learn that there is no one "right" way to conduct an interview.

Forensic/fraud auditing is an endeavor that requires a combination of financial statement analysis, business valuation, and auditing skills (Singleton et al. 2006). A reflection of casework denotes the forensic accountant's use of logic, deduction, induction, paperwork, computer work, footwork, intuition, inclusion, and elimination. This case provides an opportunity for students to experience these workplace realities as they navigate various aspects of the engagement requirements.

Learning Objectives

There are seven primary learning objectives of this case. Upon completion, students will be able to:

LO1. Incorporate fraud theory (incentive, opportunity, and rationalization) and professional skepticism in the development of a fraud hypothesis, validating (or not) the reasonableness of an allegation of fraud.

LO2. Test the fraud hypothesis via financial statement analysis, the first step in identifying accounting fraud. Financial statement analysis may reveal unexpected relationships or the absence of expected relationships. Recommended analytical techniques include trend analysis, common-size analysis, ratio analysis, and budgetary comparisons.
LO3. Test and refine the fraud hypothesis via the analysis of journal entries, identifying (or not) evidence to support inconsistencies suggested by financial statement analysis.
LO4. Test and refine the fraud hypothesis via witness interviews, from the general to the specific—neutral third parties, corroborative witnesses, suspected co-conspirators, and the target.
LO5. Identify specific financial statement and employee fraud schemes.
LO6. Determine the amount of a misappropriation (if any) and relate to specific schemes.
LO7. Prepare a written report useful to a prosecuting attorney.

Implementation Guidance

This case is intended for use in a senior-level undergraduate or graduate-level auditing or forensic accounting course. It can also be used in practitioner education, e.g., continuing professional education (CPE) and continuing legal education (CLE).

The initial stage of the case (case background) provides the springboard for meaningful classroom discussions of fraud, fraud theory, and hypothesis development. These classroom discussions allow students to "brainstorm" ideas and theories. Moreover, the students participate in the fraud evaluation process. The materials distribution strategy provides for a uniform and scientific approach.

In Table 4 (Suggested Implementation Schedule), IC = In-Class coverage, and HW = Homework assignment. The table presents approximate time requirements and materials distribution guidelines based on the nature of the course and its specific learning outcomes. Detailed classroom implementation narrative follows the implementation table.

The appendices listed below are available in the Teaching Notes for distribution based on instructor preference:

Appendix A-1: Operational Analysis
Appendix A-2: Component Percentage Analysis
Appendix A-3: Horizontal Trend Analysis
Appendix A-4: Balance Sheet Analysis
Appendix A-5: Cash Flow Analysis
Appendix A-6: Select Financial Ratios
Appendix B: GL Adjusting Entries—12/31/06
Appendix C: GL Adjusting Entries—12/31/07
Appendix D: GL Adjusting Entries—12/31/08
Appendix E: Annual Report
Appendix F: Interview Sue Bryant
Appendix G: Interview Anita Workman
Appendix H: Interview Charles Hess
Appendix I: Interview Thomas Workman
Appendix J: The Industry Outlook

Teams

This case can be worked individually or in teams. A team approach strives to combine the skills, experiences, and insights of several students and provides an excellent forum for brainstorming. Brainstorming, a relatively new concept in accounting literature, is a mandated proce-

TABLE 4

Suggested Implementation Schedule

Step	Task	Undergraduate Auditing	Forensic Graduate	Professional
1	Materials presentation—Case background (outside class read) and Appendix J—**NOT** Epilogue	HW 30–45 min IC 20–30 min	HW 30–45 min IC 20–30 min	IC 20–30 min
2	Class discussion regarding: (a) circumstances that form a reasonable basis for the shareholders' allegations, (b) brainstorming, and (c) creation of fraud hypothesis. **(LO1)**	IC 1–1.5 hr	IC 30 min–1 hr	IC 30–45 min
3	Materials presentation—Appendices A-E. Analysis facilitates testing and refinement of fraud hypothesis. **(LO2 and LO3)**	HW 2–3 hrs IC 1–2 hrs	HW 1.5–2 hrs IC 30–45 min	IC 45 min–1 hr
4	Materials presentation—Appendices F-I. Interviews facilitate fact gathering and refinement of fraud hypothesis. **(LO4)**	HW 1–2 hrs IC 1–2 hrs	HW 1–2 hrs IC 30–45 min	IC 45 min–1 hr
5	Computation of damages and report writing. **(LO6 and LO7)**	HW 2–3 hrs IC 1–2 hrs	HW 2–2.5 hrs IC 45 min–1 hr	IC 45 min–1 hr
6	Discussion regarding: (a) nature of engagement, and (b) expert opinions. **(Other Considerations)**	IC 1–2 hrs	HW 30–45 min IC 1–1.5 hrs	IC 30–45 min
7	Discussion regarding alternative dispute resolution. Distribute Epilogue. **(Other Considerations)**	IC 1–1.5 hr	HW 30–45 min IC 1–1.5 hr	IC 30–45 min
8	Professional standards, accounting and review services, agency theory, and internal control considerations. **(Other Considerations)**	HW 2–4 hrs IC 1–2 hrs	IC 45 min–1 hr	IC 30–45 min

dure of SAS No. 99 (AICPA 2002). Importantly, brainstorming should not be restricted to the initial phase of the assignment, as forensic accountants continuously gather and refine data. Thus, students should consider brainstorming throughout the assignment process.

A team approach should be considered at each level of use—undergraduate, graduate, or professional. However, a team approach does challenge balanced student participation (free-riders) and may create grading complexities for the instructor.

Step 1: Materials Presentation

Undergraduate Program

The case, with a summary of the pawnbroker industry as set forth in Appendix J (The Industry Outlook), should be distributed about a week before its intended use. *The Epilogue to the case should* not *be distributed at this time* (see Step 7). Students should have a basic knowledge of accounting and auditing and, as a prelude to the case assignment, be introduced to the world of forensic accounting, fraud theory, and SAS No. 99 (AICPA 2002). The fraud triangle should be utilized as a tool for operationalizing the three conditions generally present when fraud occurs (incentive, opportunity, and ability to rationalize) (Rams 2003). Prior to case distribution, it may be helpful to review the five steps of the scientific approach (observe event/question/research, develop hypothesis, test hypothesis, draw conclusions, and report results).

Graduate Program

Same as undergraduate.

Professional Program

Professional programs are generally constrained by time and, as such, the case should be presented for reading (IC) following a comprehensive discussion of forensic accounting, fraud theory, and the purpose of a forensic accounting investigation (i.e., investigate suspicions of fraud).

Step 2: Fraud Suspicion, Brainstorming, and Fraud Hypothesis Class Discussion (LO1)

Undergraduate Program

The work completed outside class is the foundation of in-class exploration, with teams reporting their initial observations (findings) of conditions within the organization that allow the perpetration of a fraud. Observations can be ranked in terms of suspected importance and used to illustrate the formation of a fraud hypothesis. It is recommended that the instructor select one of the observations and develop a fraud hypothesis jointly with the class. Once students understand the hypothesis development process, each group can be assigned one or more observations and challenged to develop a working hypothesis for presentation to the class at the next class session.

Once LO1 is achieved, students should be encouraged to develop a list of materials they would like to examine in order to test their fraud hypotheses.

Graduate Program

Same as undergraduate.

Professional Program

Time constraints will dictate "how" Step 2 is managed. At a minimum, it is recommended that fraud theory (i.e., the fraud triangle) be employed to identify conditions within the organization that allow the perpetration of a fraud. It is recommended that the instructor demonstrate the fraud hypothesis development process by selecting one of the observations.

Step 3: Materials Presentation (LO2 and LO3)

Undergraduate Program

To facilitate hypothesis testing, students are provided with Appendices A through E. These may be distributed all at once or through a step-by-step approach, depending on instructor case usage and time constraints.

The appendices can be used in the following manner:

1. *Appendices A and E*. Financial Statement Analysis (years 2003–2008). These appendices provide compiled financial statement summaries with common-size and horizontal trend analysis calculations. They can be employed in either of two ways:
   a. Distribute all materials (A-1 to A-5 and E) and ask students to write a short memo on the major issues highlighted by the analyses. Then, ask students to reconstruct Appendix A-5 (Cash Flow Analysis).

b. Distribute only the Operational Analysis (income statements), Balance Sheets, and Annual Report (Appendices A-1, A-4, and E, respectively) and ask students to develop the common-size and horizontal trend analyses, as well as the cash flow analysis, prior to developing written observations. This strategy allows the students to demonstrate their proficiency in Excel spreadsheets, a common tool used in the accounting profession.

Whichever approach is taken, the instructor will likely need to field questions from students in the construction of the cash flow analysis. Importantly, this exercise provides an opportunity for the instructor to review the interrelatedness of the balance sheet and income statement.

This exercise facilitates the evaluation of students' financial statement analysis skills. It also provides the opportunity to revisit and revise the stated fraud hypotheses based on any additional suspicions generated in this component of the fraud investigation.

2. *Appendices B, C, and D*. Students should be encouraged to develop a list of materials that will help them answer the questions raised to this point in the fraud investigation. The most common requests should be:
   a. General ledgers for 2006, 2007, and 2008. Often students have not seen an automated general ledger, and the instructor may need to provide a short background lecture in this area.
   b. Adjusting journal entries for each year. These are provided in the context of the general ledgers for the years 2006, 2007, and 2008 in Appendices B, C, and D, respectively.
   c. Copies of checks, invoices, and receipts. While these are not provided as part of the case materials, the information is included in the interviews contained in Appendices F, G, H, and I. The instructor can inform students as to how this data might be obtained in an actual forensic accounting investigation.

The general ledgers can be used to identify the 2006, 2007, and 2008 adjusting entries. It is useful to ask students to present these entries in general journal format. Doing so highlights the key accounts impacted each year and makes it easier for students to discern how these entries impact the financial statements. This analysis provides additional evidence related to the fraud hypotheses, which should be revisited and updated.

Graduate Program

Same as undergraduate.

Professional Program

Given the constraints of time, it is recommended that all financial data and related analyses be provided, starting with Appendix A. Instructors are encouraged to review each appendix (A through E) with a focus on testing and refining hypotheses.

Step 4: Materials Presentation (LO4)

Undergraduate Program

To enhance fact gathering and refinement of the fraud hypotheses, students are provided with Appendices F, G, H, and I—witness interviews. These can be distributed as a homework reading assignment (either sequentially or in combination) and then reviewed in class. Undergraduates will have little, if any, experience in investigative interviewing. These transcripts of interviews with key company employees can be used to familiarize students with the types of information that can be obtained through this process. Assignment strategies might include:

1. Read individually, then identify key elements in a classroom setting.

2. Read and relate (compare and contrast) to other case information (e.g., discrepancies found in the financial statement/journal entry analysis), then discuss observations in class.

The instructor can use class time to discuss a professional approach to interviewing key players in a fraud investigation. It is important to emphasize that the interview is a primary tool used by fraud investigators to gather information and make assessments.

When students complete this aspect of the case, they will have additional information with which to revise specific fraud hypotheses. Student refinements can be a graded exercise or simply a guided learning experience based on instructor preference.

Graduate Program

Same as undergraduate.

Professional Program

Given the constraints of time, it is suggested that the instructor review each interview for purpose, identifying any meaningful components and refining the stated hypotheses accordingly.

Step 5: Computation of Damages and Report Writing (LO6 and LO7)

Undergraduate Program

Students should be able to develop an estimate of damages using the information discovered in previous steps. It is suggested that undergraduate accounting students develop this analysis using the income statement approach. For example, the income statement presented for 2006 can be adjusted, using information gleaned from the fraud analysis, in order to present a pro forma corrected income statement. The suggested format is:

	As Originally Stated			Suspected Fraud Adjustments			Pro Forma Corrected Statements		
Description	**2006**	**2007**	**2008**	**2006**	**2007**	**2008**	**2006**	**2007**	**2008**

By employing the suggested format, the estimated fraud amount will appear in the adjustment column, and the pro forma amounts can be subjected to common-size and horizontal trend analysis to determine whether variances noted in the original analysis have been resolved. A completed analysis is presented in Table 1 in the Teaching Notes, Income Statement Approach to Fraud Loss Amount. Note: The summary of possible loss developed by using the year-end adjusting journal entries varies slightly from the summary of loss presented in Table 2 in the Teaching Notes, Summary Damage Opinion. This is because journal entries found in the 2006, 2007, and 2008 general ledger were reversed in Table 1 in the Teaching Notes, whereas Table 2 in the Teaching Notes includes additional amounts discovered through detailed account testing.

As an optional assignment, students can be introduced to the reporting structure professionals use to summarize their damage opinions, utilizing a specific format that details transaction, scheme, and amount by year. An example of this format for one transaction is presented below. A complete report is available in Table 2 (located in Teaching Notes).

Transaction	Scheme	2006	2007	2008
12/23/06 Check	Unauthorized disbursement; false entries	$45,000		

Graduate Program

Same as undergraduate.

Professional Program

Given the constraints of time, it is suggested that the instructor present for discussion Table 2 (Summary Damage Opinion) and Table 3 (Lost Pawn Revenue Calculation), which are provided in the Teaching Notes section.

Step 6: Engagement Considerations (Other Considerations)

Undergraduate Program

In this step, students consider the different roles played by the forensic accountant, i.e., fraud investigator, consulting versus testifying expert, and the challenges attached to each. This step also applies the concept of "burden of proof." Students should be advised that in a criminal case the burden is *beyond a reasonable doubt*, whereas in a civil case the burden is reduced to a *preponderance of the evidence*.

Graduate Program

Same as undergraduate.

Professional Program

Same as undergraduate.

Step 7: Settlement and Damages (Other Considerations)

Undergraduate Program

During this step *the Epilogue is distributed*, which provides an excellent opportunity to review the case, sources of information considered, specific transactions, and the overall assessment of loss. In addition, it provides an opportunity to discuss the advantages of alternative dispute/conflict resolution versus litigation. Finally, this step provides an opportunity to discuss the concept of error (negligence and even gross negligence) versus fraud and the *supporting* role of the forensic accountant. In other words, a decision to settle (versus prosecute) falls outside the role of the forensic accountant. Specific resolution attributes are presented in the Teaching Notes.

Graduate Program

Same as undergraduate.

Professional Program

Same as undergraduate.

Step 8: Indirect Methods of Reconstructing Income, Business Valuations, Professional Standards, Ethics, Agency Theory, Internal Control, and Review versus Compilation (Other Considerations)

Undergraduate Program

In this step, various tangential aspects of the case can be introduced and discussed. Those using this case can select from the following to amplify the LOs, to address other aspects of an auditing/forensic accounting course, or for professional training experience.

1. *Indirect Methods of Reconstructing Income.* It is not uncommon for embezzlers or fraudsters to alter or destroy books and records related to wrongdoing. Thus, the forensic accountant must identify alternative strategies for reconstructing income. Indirect methods are commonly used by the IRS to determine unreported illegal income (e.g., gambling and drugs). A classic case of such use is Al Capone. Primary indirect methods include the net worth method, the bank deposits method, the expenditures method, and

the mark-up method. Extended discussions and examples of each method can be found in the Internal Revenue Manual (IRM).[3]

2. *Business Valuations*. The concept of "business valuation" surfaced in the background case materials. Upon J. D.'s death, the business was valued at $350,000 ($518,500 before application of a 32.5 percent marketability discount). As indicated, the value was determined using the capitalization of earnings method. For an explanation of marketability discount and capitalization of earnings method, see Pratt (2008).

   This background narrative provides an excellent springboard for a discussion of business valuation theory and principles. Forensic accountants are commonly engaged to perform business valuations in a number of settings, including estate tax, divorce, and shareholder buy/sell agreements.
3. *Professional Standards*. These are applied to the activities of CPA Hess. Students may be asked to review the professional standards and identify those violated by Hess. Areas of focus (see AICPA 2008) include:
   a. Rule 101: Independence—related to the review engagement.
   b. Rule 201: General standards—including professional competence, due professional care, planning and supervision, and sufficient relevant data.
   c. Rule 202: Compliance with standards—AICPA's Statement on Standards for Accounting and Review Services (SSARS) should be used to evaluate Hess in this area.
4. *Ethics*. This case provides an opportunity for students to discuss the basic tenets of ethical and professional conduct. The AICPA ethical code can be introduced, facilitating a discussion of governing principles, decisions, and why an ethical code is necessary (AICPA 2008).
5. *Agency Theory*. This case provides an opportunity to discuss the conflict between owners and professional managers. Under the law, agents have an obligation to act in the best interest of owners (Adams 1994).
6. *Internal Control*. Students can be asked to identify internal control weaknesses apparent in the case. These include separation of duties, the Workman family controlling all aspects of the accounting process (including all receipts and disbursements), the abandonment of the perpetual inventory management system, and the breach of the accrual method of accounting (pawn inventory and receivables) (Biegelman and Bartow 2006).
7. *Review and Compilation Requirements*. The case indicates that Workman failed to facilitate required *audited* financial statements. Rather, the 2006 statements were reviewed by Hess, and the 2007 and 2008 statements were compiled. A recommended optional assignment relative to this subject is to have students review the AICPA's SSARS and identify the key requirements of financial statement preparation for each type of report (Ratcliffe et al. 2009). A suggested outline for this analysis is presented in Table 5 (Review and Compilation Worksheet), which can be distributed to students as a guide.

Graduate Program

Same as undergraduate.

Professional Program

Generally not applicable due to time constraints.

[3] See Part 9, Chapter 5, Section 9. Can be found at http://www.irs.gov/irm/part9/irm_09-005-009.html

TABLE 5
Review and Compilation Worksheet

No.	Engagement Component	Review	Compilation
1.	Limited assurance statements are in accordance with GAAP	**Y**	**N**
2.	Informative disclosures required		
3.	Independence required		
4.	Exercise of due care required		
5.	Establish an understanding of the engagement with the client		
6.	Understand client's accounting principles and industry practices		
7.	Know the client and client's business practices		
8.	Make inquiries of management about accounting practices and methods, BOD actions, and consistency of accounting practices with GAAP		
9.	Perform appropriate analytical tests		
10.	Obtain management representation letter		
11.	Tests of transactions and balances required		
12.	Tests of internal control required		

Student Feedback

This case has been alpha tested at the undergraduate, graduate, and professional levels. At the undergraduate level, the case was employed in one section of an auditing class, where student knowledge about significant case concepts was collected before and after the case was utilized. Student concept knowledge was collected using a questionnaire that asked the student to indicate, on a seven-point Likert-type scale, their level of understanding of key material used to operationalize the learning outcomes. The scaling measures are 1 = no knowledge of the concept, 4 = somewhat knowledgeable about the concept (average), and 7 = highly knowledgeable about the concept. The pre- and post-case results were tested using a Wilcoxon Matched-Pairs Signed Ranks test.

As illustrated in a Pre-Test/Post-Test Analysis presented in Table 6, undergraduates exhibited significant learning in each of the first seven case concepts ($p < 0.05$). There was no significant learning in the last three items for several reasons. Professional skepticism had been covered two weeks prior to use of the case, and conducting interviews and expert witness requirements were only covered briefly. The coverage of these concepts was intended to show students what is expected, but not to teach them how to perform these professional activities. (Mock sessions would be required to accomplish learning in these areas, and time did not permit such treatment in the undergraduate class.)

After the post-case survey was conducted, students completed a third survey. This survey asked them to assess their level of pre-case knowledge of each activity based on what they learned about these areas through the case interaction (post-case pre-test). The ratings for pre-case learning activities five and seven decreased significantly from the pre-case rating. Pro forma CF analysis declined from 4.5 to 2.1 and journal entry analysis declined from 4.7 to 2.7, which were significant changes when analyzed using a Wilcoxon Matched Pairs test ($p < 0.05$, denoted by * in Table 6). The post-case pre-test ranking is reported for these two items in Table 6. Because there were no significant differences between the pre-test and post-case pre-test scores for the remaining items in Table 6, the original pre-test scores are reported.

TABLE 6
Pre-Test/Post-Test Analysis

Learning Activity		Pre-Case Survey	Post-Case Survey	Change	Wilcoxon Matched Pairs Z	Wilcoxon Matched Pairs p
1	Pre-Test to Post-Test:					
2	Fraud Triangle	2.1	6.4	4.3	−2.829	0.005
3	Three Steps of Fraud	2.2	5.8	3.6	−2.558	0.011
4	Develop Fraud Hypothesis	2.4	5.8	3.4	−2.671	0.008
5	Pro Forma CF analysis	2.1	5.5	3.4	−2.814	0.005*
6	Pro Forma RE reconciliation	3.6	6.2	2.6	−2.530	0.011
7	Journal entry analysis	2.7	5.5	2.8	−2.850	0.004*
8	Estimating fraud amount	2.5	4.9	2.4	−2.689	0.007
9	Professional skepticism	6.0	6.6	0.6	−0.962	0.336
10	Conducting interviews	2.8	4.2	1.4	−1.741	0.082
11	Expert witness	2.3	3.4	1.1	−1.622	0.105

* The statistical test for learning activities 5 and 7 used the post-case pre-test student ranking in place of the original pre-case survey ranking as described in the article narrative.

This is an interesting finding. On the original pre-test, students were overconfident in their understanding of concepts five and seven; however, upon working through the case activities, they came to realize that their initial knowledge of these concepts was not as advanced as initially thought.

At the graduate level, this case has been used in one section of forensic accounting and one section of auditing. In forensic accounting, the case was used at the program's midpoint, following comprehensive discussions of fraud theory, legal framework, psychology of the fraudster, expert opinions, and fraud investigations. Pre-case student challenges included exercises in evidence gathering (e.g., financial statement analysis, interviewing, observations, and indirect methods) and report writing. The case was used to reconcile theory with practice, employing a scientific approach. In the auditing program, the case was used to operationalize SAS No. 99 (AICPA 2002), specifically the challenge of brainstorming. Students' comments about the case included:

- I enjoyed the team exercises, particularly brainstorming.
- Working with incomplete information forced me to "think outside the box."
- The step-by-step evaluation process helped me identify the key issues.
- The case could be a stand-alone graduate course.

At the professional level, alpha testing followed two days (16 hours) of classroom study in forensic accounting and fraud investigation. The case served to reconcile theory with practice, employing a scientific approach. Following completion of the program, 86 percent (18/21) of participants successfully tested to become Accredited Fraud Investigators (AFI). Each received 24 hours of continuing professional education (CPE) credits. Participants' comments about the case included:

- The case incorporates all elements of the program.
- This real-world scenario highlights the investigative aspects of forensic accounting.
- As an attorney, I appreciated the legal applications.
- The best CPE I've ever had.

Graduate Student and Practitioner Performance

As presented in the Summary Damage Opinion (Table 2 in the Teaching Notes), the total loss is estimated at $406,641, including three components: (1) specific transactions—$184,955, (2) loss of pawnshop revenue—$196,543[4] (see Table 3 in the Teaching Notes), and (3) interest on damages—$25,143. Our experience is that graduate-level students tend to perform better on the quantitative task (i.e., the right answer) than practitioners. Specifically, the average response for graduate students is 81 percent of the total loss, while the average practitioner response is 67 percent. One explanation for the difference in performance is constraint of time, i.e., practitioners process the case (start to finish) in five to six hours, whereas graduate students process the case in 16 to 24 hours.

TEACHING NOTES

Teaching Notes are available only to full-member subscribers to *Issues in Accounting Education* through the American Accounting Association's electronic publications system at http://aaapubs.org/. Full-member subscribers should use their usernames and passwords for entry into the system where the Teaching Notes can be reviewed and printed. Please do not make the Teaching Notes available to students or post them on websites.

If you are a full member of AAA with a subscription to *Issues in Accounting Education* and have any trouble accessing this material, then please contact the AAA headquarters office at info@aaahq.org or (941) 921-7747.

REFERENCES

Adams, M. B. 1994. Agency theory and the internal audit. *Managerial Auditing Journal* 9 (8): 8–12.

American Institute of Certified Public Accountants (AICPA). 2002. *Consideration of Fraud in a Financial Statement Audit.* Statement on Auditing Standards (SAS) No. 99. New York, NY: AICPA.

——. 2008. *AICPA Professional Standards: Code of Professional Conduct and Bylaws*. New York, NY: AICPA.

Biegelman, M. T., and J. T. Bartow. 2006. *Executive Roadmap to Fraud Prevention and Internal Control: Creating a Culture of Compliance*. New York, NY: John Wiley & Sons.

Pratt, S. 2008. *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*. Fifth edition. New York, NY: McGraw-Hill.

Rams, M. 2003. Auditors' responsibility for fraud detection. *Journal of Accountancy* 195 (1): 28–35.

Ratcliffe, T. A., C. E. Landes, and M. P. Glynn. 2009. A fresh approach for compilation and review. *Journal of Accountancy* 208: 24–31.

Singleton, T. W., A. J. Singleton, G. J. Bologna, and R. J. Lindquist. 2006. *Fraud Auditing and Forensic Accounting*. Third edition. New York, NY: John Wiley & Sons.

[4] Interest of $109,563 and product sales of $86,980.