

# Case 1: Fraudulent Financial Statements

## 1-1 LARSEN CONVENIENCE STORE: USING ANALYTICAL PROCEDURES IN DETECTING FINANCIAL STATEMENT FRAUD

### Learning Objective

After completing and discussing this case, you should be able to:

1. Review and analyze financial statement information relating to a company's balance sheet and income statement accounts using horizontal and vertical analysis method.
2. Identify potential fraudulent financial accounts for closer scrutiny.
3. Understand one method used to estimate the loss from the destruction of the out-of-sight (destroyed) inventory (cost of goods sold as a percent of gross receipts).
4. Be able to use one ratio (days sales of inventory) to detect potentially misstated inventory balances.

## HISTORY BEHIND THE FRAUD CASE:

In one of the author's fraud cases, an incendiary device destroyed a franchised grocery store at 3:00 a.m. on December 31. The Special Agent in Charge (SAC) of the investigation wanted the case agent to close the case because the store experienced its best year ever. Why would the owner destroy a profitable business? At the time the request was made, two cause-and-origin teams concluded that the torches poured over 30 gallons of gasoline that caused a massive explosion, which blew the front windows several hundred feet into the parking lot, warped huge girders, and propelled a concrete wall into the street almost killing a motorist. The case agent pleaded with the author to give the financial information a second look to avoid closing the criminal investigation.

A quick horizontal and vertical analysis of gross receipts, beginning and ending inventory, cost of goods sold, and gross receipts highlighted a potential material misstatement with the ending inventory. Ending inventory was over \$300,000 higher and gross and net profits were substantially higher than in the prior three years. Telephone calls to the primary vendors revealed that the owner was delinquent and they had forced him to sign promissory notes and pay for all future shipments cash-on-delivery (COD). Agent interviews documented that the shelves were almost bare at the time of the fire.

A physical inventory taken at night 90 days before the fire was unusual. Instead of being taken during the day by professional inventory takers, it was allegedly taken by the owner and his tax accountant (a felon) late at night on a weekend. A handwriting analysis of the physical inventory tapes indicated that the tapes were not made by the owner or tax accountant. Thinking that the handwriting was that of the head teller, the case agent and author interviewed her. When confronted, she cried and then admitted to making up the ending inventory after the fire (and not 90 days before the fire) in the tax accountant's office a week after the fire. The fraud examination of the bank checking account and loan records revealed over 600 insufficient funds charges involving the owner and tax accountant and a bank loan made before the fire to help stop a constant overdraft of the owner's checking account. It also detected check kiting between the owner and tax accountant. A painstaking roll-forward of the inventory from the prior accounting period and benchmarks confirmed the material overstatement. The author testified as an expert witness for four days.

The jury convicted both the owner and tax accountant. The judge sentenced both to ten years; however, both were paroled after three years. Because the owner did not pay the \$1 million in restitution that started on the day he was released, a probation revocation hearing was held. During his incarceration, the owner's wife and daughter liquidated and spent his assets. The judge sent the owner back to prison for the remainder of his sentence.

## Introduction

Analytical procedures are powerful forensic accounting tools in conducting a fraud examination. When financial statements (balance sheet, income statement, and statement of changes) are available in whole or in part, analytical procedures can be useful as a starting point in a Fraud Examination. In an ideal world, the fraud examiner has a full set of financial statements (audited statements, reviewed statements, or compiled statements that are neither audited nor reviewed). In some cases, the fraud examiner has to work with only partial financial statements, for example, income statements (e.g., IRS Schedules C, proprietorship income tax returns) or balance sheets (e.g., personal financial statements given to a financial institution).

Analysis of these documents can provide leads and/or corroborative evidence that support other types of evidence (e.g., interviews and supporting financial documentation).

This case teaches the use of horizontal and vertical analysis of an income statement and personal financial statement. It also teaches the calculation of selected financial ratios to augment the horizontal and vertical analysis. In addition, it teaches one method for estimating out-of-sight inventories (e.g., inventories destroyed by fire, flood, or other catastrophe) using the cost of goods sold to gross revenues method. For extra credit (25 points), you may research and roll-forward the October 31, 2016, physical inventory to the date of destruction; adding purchases (which are at cost) and subtracting sales (which must be reduced from retail price at cost).

Normally, income statements prepared for tax purposes and personal financial statements are prepared separately and at different times of year and cannot be used together. In some cases, you can use both. Therefore, when conducting a fraud examination, you need to step back and determine what financial documents can be connected.

From experience with arson-for-profit cases, many proprietorship arsons take place at or near the end of the year. According to IRS regulations, ending inventory should be at or near yearend. Financial institutions often require its commercial loan customers to provide them with Small Business Administration (SBA) (or similar) personal financial statements at the beginning of the year. Since both documents are prepared around the same time, you may be able to use one (IRS Schedule C) as an income statement and the other personal financial statement) as the related balance sheet for ratio purposes. Note: Bank personal financial statements may not be a true balance sheet—the personal financial statement when a proprietorship is involved often includes both

personal and business assets and liabilities as well as personal sources of income (e.g., a spouse's salary). Accordingly, you may have to separate the personal and business assets and liabilities, as you will do in this case.

Net profit and loss and assets and liabilities may not be accurate. Through the following analyses, you will detect material abnormal balances from the facts of the case as well as by vouching<sup>1</sup> the totals listed on the statements back to original accounting documents (e.g., vendor bills, invoices, and summary statements, bank/mortgage loan statements, etc.) and determine what additional fraud examination steps, if any, should be taken.

## Background

Three months before Tonya Larsen walked out of Anderson Internal Medicine, a suspicious incendiary fire took place at her husband's convenience store in Canton, Georgia. As with most casualty claims, the examination of the claim takes months to complete as the company files a proof of loss and provides requested documentation, fraud examiners prepare business interruption calculations, and the attorney prepares for and then takes the insured's examination under oath (EUO). Under the standard insurance contract, the insured (Greg Larsen) must (1) provide requested financial documents and (2) submit to a EUO by an attorney hired by the insurance company. If the insured does not, he/she will not be paid for their loss.

The fire started at Larsen Convenience Store in Canton, Georgia, around midnight on December 31, 2015, and completely burned all of the structure and contents to the ground. Agents from the State Fire Marshal's office and independent cause and origin experts hired by the insurance company conducted a cause and origin investigation of the fire scene and determined that the fire was incendiary (i.e., intentionally set as opposed to being caused by natural, mechanical, or electrical causes). The deputy fire marshals and experts found four sources of ignition. Georgia Bureau of Investigation chemists analyzed carpet and wood samples identified by arson dogs at the fire scene and found the samples to contain hydrocarbons in the same category as gasoline. Insurance company special agents also asked Greg Larsen the following questions:

1. Who discovered the fire?
2. How was he notified of the fire?

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<sup>1</sup>Vouching is an auditing term indicating the examination of a number of a financial statement (total number or individual transaction) back to documentary evidence or supporting documentation.

3. Who was the last person in the building?
4. Who has keys to the building?
5. Did he notice any unusual activity before the fire?
6. Is he the owner or the tenant?
7. What is the location of flammables, utilities, etc.?
8. Did he know of any fire hazards and flammable liquid storage?
9. How were the business and his personal finances at the time of the fire?

Among his answers, Greg Larsen said that he (his business) had just completed its best year ever, sales and net profits were significantly higher than prior years. Larsen also stated that he rented the building from J. L. Jensen LLC for \$1,000 a month and had 24 months left on his lease. Larsen told the agents that surely a pyromaniac or someone with a grudge lit the fire.

Because the cause was an incendiary fire, Southern Appalachian Insurance assigned the follow-up civil investigation to its Special Investigative Unit (SIU) and expanded the services of Alexander Z. Boone to include the casualty loss claim. On March 18, 2016, Greg Larsen filed the proof of loss with Southern Appalachian Insurance for the loss of his inventory, shelving, and leasehold improvements and business interruption (lost net profits and continuing expenses). As requested by the attorney, Greg Larsen also provided financial records, including the 2013, 2014, and 2015 federal income tax returns and January 7, 2014, 2015, and 2016 SBA personal financial statements filed with Sharptop Bank, and a physical inventory he took on October 31, 2015. The 2015 federal income tax return shows that Greg Larsen had his best year ever, having net income totaling \$130,458. With such a great net income, Attorney Boone thought that Greg Larsen had no financial motive to burn his store.

Thus far, the SIU special agents found:

1. Greg Larsen primary suppliers, Georgia-Tennessee Fuel Partners, Shamrock Groceries, Discount Tobacco Supply, Marietta Beverage Company, and Jenkins Media Services had required Greg Larsen in early November 2015 to sign promissory notes for their respective unpaid balances. Instead of cutting him off, each made future deliveries subject to cash on delivery. The special agents had Greg Larsen sign an Authorization to Release Financial Records and obtained records from the vendors and Georgia Department of Revenue.
2. Regular customers of Larsen Convenience stated that in the days leading up to the fire, Larsen did not carry their brand of beer, snacks, and tobacco.

In fact, the beer and tobacco inventory looked low (i.e., half the tobacco bins behind the counter were empty).

3. Larsen had a sale on paper towels, which sat on a pallet in the center of the store.
4. Several years ago, Greg Larsen had a heated argument with his nephew, an employee of the store, in the parking lot. Greg Larsen jumped into his truck, backed it up in anger, and accidentally ran over and killed his nephew. His sister and brother-in-law sued him in state court for wrongful death and won a \$500,000 judgment. The state court judge handed down his decision in mid-October 2013. The appellate court affirmed the lower court decision in September 2014, and the Georgia Supreme Court denied certiorari in May 2015. The denial of certiorari had the direct effect of upholding the appellate court's decision and making the \$500,000 judgment a collectible debt. In July 2015, Southern Appalachian Insurance paid his sister and brother-in-law \$75,000, the limit of the business liability insurance policy. In September 2015, his sister and brother-in-law obtained a court order and subsequently seized the funds in his business bank account and put a lien on his business assets.
5. Greg and Tonya Larsen were in arrears on their mortgage at the end of December and potentially facing foreclosure unless they came up with several thousand dollars.

### Summary Requirement:

Your role in the examination of the Greg Larsen has been expanded by Alexander Z. Boone to perform the following under attorney-client privilege:

- A financial condition (solvency) analysis of Greg Larsen's business (Larsen Convenience Store) at the time of the fire
- Review the claimed casualty loss and determine the estimated inventory loss on the fire date

Before proceeding, read the documents in Chapter 7, section 7-1, "Larsen Convenience Store." As you work the case, you will have to read and reread the documents to fully understand the evidence.

Study section 1-2 on *How to Perform a Vertical and Horizontal Analysis* that follows this case before conducting the specific requirements relating to this analysis.

The results of your assignment will be used by the attorney during the EUO. Your assignment (in general) is, as follows:

1. Perform a financial condition analysis of Larsen Convenience as of the fire date, using the tax returns, SBA personal financial statements, October 31, 2015, physical inventory, and all information at your disposal. Among other procedures,
  - a. Perform two separate vertical and horizontal analyses of the 2013–2015 Schedules C and January 7, 2014, 2015, and 2016 SBA personal financial statements. Highlight material differences.
  - b. Calculate the 2015 estimated ending inventory using the cost of goods sold/gross revenues method using the tax returns:
    - i. Calculate the average cost of each product line (e.g., beverages, groceries, tobacco) and associated average gross revenue (e.g., revenue groceries/food) for 2013 and 2014 by adding the totals for both years and dividing result by 2.
    - ii. Divide the average cost of each product line by the average gross revenue.
    - iii. Multiply the result by the associated 2015 gross revenue to derive the estimated 2015 cost of product line (e.g., cost of beverages, groceries, and tobacco).
    - iv. Back into the estimated 2015 ending inventory by adding beginning inventory and purchases and then subtracting the estimated 2015 cost of product.
    - v. Recalculate the gross profit and net profit.
    - vi. Repeat for each of the ending inventories that appear to be overstated.
2. Calculate the Days Sales of Inventory ratio for December 31, 2013, 2014, and 2015 for total, groceries, beverages, and tobacco sales.
3. Determine the types of alleged frauds perpetrated by Greg Larsen related to reporting the financial data for Larsen Convenience. **DO NOT allege arson!**
4. Prepare a report and associated schedules using the sample report and schedules.
5. Prepare audiovisuals (e.g., charts, summary schedules, and/or graphs of your choice) to simplify these complex accounting issues. Hint: Comparison of balance sheet and income statement assertions (e.g., inventory at the end of the years 2013, 2014, and 2015) make easy to understand audiovisuals.

The initial steps (see exercises) are to be completed individually. You may confer online on strategy, but do your own work. In particular, each student is to schedule and analyze the tax returns and SBA personal financial statements using Excel, calculate the days sales of inventory ratio, and submit their Excel working papers for grades. These steps will be performed as a series of graded exercises designed to walk you through the process.

The final exercise is a team project. Each team will submit a final examination report addressed to the attorney for Southern Appalachian Insurance, accompanying set of schedules, and audiovisuals for a grade. Each team is to select a team leader, who assigns various tasks to each member of the team, emails a list of each student's assignment, and emails the final deliverables. The team leader is responsible for quality control and should not take on any additional tasks.

## Accuracy Certifications and Potential False Statements

When examining financial statements, be aware that most common financial documents have certifications as to the accuracy of the submitted information above or below the signature line. Whoever knowingly prepares and/or submits MATERIALLY untrue, inaccurate, incomplete, or misleading information can be prosecuted for making MATERIAL misstatements.

In this case, you will examine IRS Forms 1040, SBA Personal Financial Statements, and a Sworn Statement in Proof of Loss. All three have accuracy certifications.

### *IRS Form 1040*

Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief, they are true, correct, and complete. Declaration of preparer (other than taxpayers) is based on all information of which preparer has any knowledge.

### *Small Business Administration (SBA) Personal Financial Statement*

**CERTIFICATION:** (to be completed by each person submitting the information requested on this form)

By signing this form, I certify under penalty of criminal prosecution that all information on this form and any additional supporting information submitted with this form is true and complete to the best of my knowledge. I understand that SBA or its participating Lenders or



Certified Development Companies or Surety Companies will rely on this information when making decisions regarding an application for a loan or a surety bond. I further certify that I have read the attached statements required by law and executive order.

### *Sworn Statement in Proof of Loss*

Any person who knowingly and with intent to injure, defraud or deceive any insurance company files a statement of claim containing any false, incomplete or misleading information is guilty of a felony of the third degree.

### **When Contacting Law Enforcement, Do Not Forget the IRS Criminal Investigation Division (CID)**

When you have completed your fraud examination, your client, employer, or insurance may want to refer your findings to local law enforcement. Often, alleged fraud cases prosecuted at the local level result in probation and no prison due to overcrowding. Fraudsters are not violent criminals. IRS regulations require that ill-gotten gains be reported on the fraudster's income tax return. However, when fraudsters steal money, they often do not report it on their income tax returns. If IRS CID takes the tax evasion case and it goes to trial, fraudsters often receive sentences of 44 to 48 months incarceration. In one fraud examination, the fraudster stole an average of \$12,000 a month for three years. The local detective said he had never seen more than probation given. IRS CID took the case, and two years later the fraudster was convicted and sent to jail for 44 months.

## **1-2 HOW TO PERFORM A HORIZONTAL, VERTICAL, AND RATIO ANALYSIS**

### **Learning Objective**

After reading this synopsis, you should be able to:

1. Horizontally spread fraudulent data (e.g., from balance sheets, income statements, monthly inventory summaries).
2. Where applicable, add common-sized ratios.
3. Identify horizontal and vertical anomalies (e.g., an account where the balance materially increased or decreased in comparison with prior periods) and/or trends (e.g., seasonality in the revenue account).
4. Estimate the actual amount of a material anomaly (e.g., ending inventory).

## Introduction

Horizontal and vertical analysis is a tool to compare common financial information that is recorded monthly, quarterly, and/or annually. The more data points available (36 monthly versus three annual financial statements) the better the analysis of trends (e.g., seasonality, steadily increasing or decreasing revenues, steadily increasing or decreasing expenses) and abrupt changes (e.g., huge quarterly decreases in certain expenses like salaries and wages). By itself, or combined with ratio analysis between financial statements (e.g., days sales in inventory and days sales in receivables), the fraud examiner can use this tool to pinpoint accounts that require further examination (e.g., obtaining and examining documents and/or conducting interviews).

Below is a discussion of horizontal, vertical, and ratio analysis using only three annual income statements (IRS Schedules C, Profit or Loss for a Proprietorship). Similar analysis can be performed for 12 quarterly or 36 monthly unaudited financial statements (balance sheet, income statement, and statement of cash flow) as well as other financial information like comparative physical inventories.

## Steps in Performing a Horizontal and Vertical Analysis

Performing a horizontal and vertical analysis on a spreadsheet is a multistep process.

### *STEP 1: Schedule the Data*

Schedule the financial information. Below is an IRS Schedule C (Proprietorship Profit & Loss Statement) from an individual's tax return. You can schedule other sets of financial information like balance sheets, specific account totals by month, quarter, or year (e.g., customer accounts receivable totals, accounts payable totals, inventory totals, monthly purchases by type).

	<b>From Schedules C</b>		
	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Gross receipts</b>	<b>\$320,000</b>	<b>\$350,000</b>	<b>\$300,000</b>
Beginning inventory	90,000	95,000	99,000
Purchases	250,000	275,000	235,000
Ending inventory	<u>95,000</u>	<u>99,000</u>	<u>145,000</u>
<b>Cost of goods sold</b>	<b><u>\$245,000</u></b>	<b><u>\$271,000</u></b>	<b><u>\$189,000</u></b>
<b>Gross profit</b>	<b><u>\$75,000</u></b>	<b><u>\$79,000</u></b>	<b><u>\$111,000</u></b>

	<b>From Schedules C</b>		
	<b>2013</b>	<b>2014</b>	<b>2015</b>
Advertising	700	900	1,000
Car & truck expenses	6,000	6,000	6,000
Insurance	3,000	3,000	4,000
Interest—other	100	1,600	1,800
Legal & professional	750	750	15,000
Office	395	950	550
Rent	10,800	10,800	10,975
Repairs	900	1,200	1,655
Supplies	1,500	1,668	3,000
Taxes & licenses	1,800	1,200	1,500
Utilities	4,000	4,000	5,900
Wages	<u>4,000</u>	<u>4,000</u>	<u>1,666</u>
<b>Total expenses</b>	<b><u>\$33,945</u></b>	<b><u>\$36,068</u></b>	<b><u>\$53,046</u></b>
<b>Net profit/loss</b>	<b><u>\$41,055</u></b>	<b><u>\$42,932</u></b>	<b><u>\$57,954</u></b>

### STEP 2: Add Common-sized Ratios

Add common-sized percentages (e.g., use *gross receipts* as the base for income statements, *total assets* as the base for balance sheets, *total inventory* for inventory summaries). Do not clutter the percent column with unneeded decimals (like 28.1% or 28.15%). Round up unless specificity is needed.

	<b>From Schedules C</b>					
	<b>2013</b>	<b>%</b>	<b>2014</b>	<b>%</b>	<b>2015</b>	<b>%</b>
Gross receipts	\$320,000	100%	\$350,000	100%	\$300,000	100%
Beginning inventory	90,000	28%	95,000	27%	99,000	33%
Purchases	250,000	78%	275,000	79%	235,000	78%
Ending inventory	<u>95,000</u>	<u>30%</u>	<u>99,000</u>	<u>28%</u>	<u>145,000</u>	<u>48%</u>
<b>Cost of goods sold</b>	<b><u>\$245,000</u></b>	<b><u>77%</u></b>	<b><u>\$271,000</u></b>	<b><u>77%</u></b>	<b><u>\$189,000</u></b>	<b><u>63%</u></b>
<b>Gross profit</b>	<b><u>\$75,000</u></b>	<b><u>23%</u></b>	<b><u>\$79,000</u></b>	<b><u>23%</u></b>	<b><u>\$111,000</u></b>	<b><u>37%</u></b>

(continued)

	From Schedules C					
	2013	%	2014	%	2015	%
Advertising	700	0%	900	0%	1,000	0%
Car & truck expenses	6,000	2%	6,000	2%	6,000	2%
Insurance	3,000	1%	3,000	1%	4,000	1%
Interest—other	100	0%	1,600	0%	1,800	1%
Legal & professional	750	0%	750	0%	15,000	5%
Office	395	0%	950	0%	550	0%
Rent	10,800	3%	10,800	3%	10,975	4%
Repairs	900	0%	1,200	0%	1,655	1%
Supplies	1,500	0%	1,668	0%	3,000	1%
Taxes & licenses	1,800	1%	1,200	0%	1,500	1%
Utilities	4,000	1%	4,000	1%	5,900	2%
Wages	4,000	1%	4,000	1%	1,666	1%
<b>Total expenses</b>	<b>\$33,945</b>	<b>11%</b>	<b>\$36,068</b>	<b>10%</b>	<b>\$53,046</b>	<b>18%</b>
<b>Net profit/loss</b>	<b>\$41,055</b>	<b>13%</b>	<b>\$42,932</b>	<b>12%</b>	<b>\$57,954</b>	<b>19%</b>

### STEP 3: Analyze Dollars and Percentages Horizontally and Vertically

Analyze vertically and horizontally for anomalies in dollars and by percentages (e.g., trends up or down, abnormal common-sized ratios, abrupt changes in account totals). In the following example, the 2015 ending inventory is significantly higher than the prior two years in both dollars and as a percent of gross receipts. Similarly, interest is up slightly, but legal and professional expenses increased significantly, while wages are materially lower.

	From Schedules C					
	2013	%	2014	%	2015	%
Gross receipts	\$320,000	100%	\$350,000	100%	<b>\$300,000</b>	100%
Beginning inventory	90,000	28%	95,000	27%	99,000	<b>33%</b>
Purchases	250,000	78%	275,000	79%	235,000	78%

	From Schedules C					
	2013	%	2014	%	2015	%
Ending inventory	<u>95,000</u>	<u>30%</u>	<u>99,000</u>	<u>28%</u>	<b><u>145,000</u></b>	<b><u>48%</u></b>
<b>Cost of goods sold</b>	<b><u>\$245,000</u></b>	<b><u>77%</u></b>	<b><u>\$271,000</u></b>	<b><u>77%</u></b>	<b><u>\$189,000</u></b>	<b><u>63%</u></b>
<b>Gross profit</b>	<b><u>\$75,000</u></b>	<b><u>23%</u></b>	<b><u>\$79,000</u></b>	<b><u>23%</u></b>	<b><u>\$111,000</u></b>	<b><u>37%</u></b>
Advertising	700	0%	900	0%	1,000	0%
Car & truck expenses	6,000	2%	6,000	2%	6,000	2%
Insurance	3,000	1%	3,000	1%	4,000	1%
Interest—other	100	0%	1,600	0%	1,800	1%
Legal & professional	750	0%	750	0%	<b>15,000</b>	<b>5%</b>
Office	395	0%	950	0%	550	0%
Rent	10,800	3%	<u>10,800</u>	3%	10,975	4%
Repairs	900	0%	1,200	0%	1,655	1%
Supplies	1,500	0%	1,668	0%	3,000	1%
Taxes & licenses	1,800	1%	1,200	0%	1,500	1%
Utilities	4,000	1%	4,000	1%	5,900	2%
Wages	<u>4,300</u>	<u>1%</u>	<u>4,000</u>	<u>1%</u>	<b><u>1,666</u></b>	<b><u>1%</u></b>
<b>Total expenses</b>	<b><u>\$33,945</u></b>	<b><u>11%</u></b>	<b><u>\$36,068</u></b>	<b><u>10%</u></b>	<b><u>\$53,046</u></b>	<b><u>18%</u></b>
<b>Net profit/loss</b>	<b><u>\$41,055</u></b>	<b><u>13%</u></b>	<b><u>\$42,932</u></b>	<b><u>12%</u></b>	<b><u>\$57,954</u></b>	<b><u>19%</u></b>

#### STEP 4: (Optional) Estimate the Impact of the Anomaly

The previous analysis detects some material differences. In the example above, ending inventory is a material anomaly (45% of gross receipts versus 28–30% of gross receipts in prior years). This anomaly *overstates* assets on the balance sheet (ending inventory) and *understates* gross and net profit on the income statement. In such circumstances you may want to *estimate the impact* of the anomalies. One method for estimating the ending inventory is the cost of goods sold/gross receipts method, which is demonstrated as follows.

### Using the Periodic Inventory Formula

NOTE: Below is an example of the periodic inventory method where the company takes a physical inventory. The physical inventory is subtracted from the goods available for sale.

<b>Take a Physical Inventory</b>	<b>Example</b>
Beginning inventory	\$100,000
Plus: Purchases	<u>300,000</u>
Equals: Goods available for sale	400,000
Minus: Ending inventory (B/S)	<u>(75,000)</u>
Equals: Cost of goods sold (I/S)	\$325,000

NOTE: The periodic inventory method is *reversed* when the company cannot take an ending inventory (e.g., inventory is destroyed). The example takes numbers for the comparative schedules above.

First, *estimate* the cost of goods sold by dividing the average cost of goods sold by the average gross receipts from prior periods (using the previous example).

	<u>2013</u>	<u>2014</u>	<u>Average</u>
Cost of goods sold	\$245,000	\$271,000	\$258,000
Gross receipts	\$320,000	\$350,000	\$335,000
Percentage (CGS/Gross receipts)			77%
2015 Gross receipts		×	<u>\$300,000</u>
2015 Estimated cost of goods sold			\$231,000

Second, plug the estimated cost of goods sold into the formula to get the estimated ending inventory.

<b>Inventory Destroyed</b>	<b>Example</b>
Beginning inventory	\$99,000
Plus: Purchases	235,000
Minus: Est. Cost of goods sold	<u>(231,000)</u>
	<b>Estimate using prior COGS/Gross Revenue</b> ←
Equals: Est. Ending inventory	\$103,000

### 1-3 EXERCISES—FRAUDULENT FINANCIAL STATEMENTS (LARSEN CONVENIENCE STORE)

#### Exercise 1: Individual Assignment

1. Input the IRS Schedules C from the 2013–2015 income tax returns into a spreadsheet.
  - a. Add percent columns to the right of dollar column for each year.
  - b. Calculate common-sized percentages in the percent columns [divide each number for that year (e.g., 2013) by gross receipts for that year (e.g., 2013)].
  - c. Review the dollars horizontally across the three years and vertically down each year and identify any material irregularities.
  - d. Review the percentages horizontally across the three years and vertically down each year and identify any material irregularities.
  - e. Are there any material trends or material single-year changes (e.g., material increases or decreases)?
2. Input the other metrics from the individual tax returns (e.g., income from wages and salaries, interest earned, and estimated tax payments).
  - a. Review the dollars horizontally across the three years and vertically down each year and identify any material irregularities.
  - b. Compare estimated tax payments with total taxes for the year (vertically during the same year).
  - c. Are there any material trends or material single-year changes (e.g., material increases or decreases)?
3. Because you did not observe the inventory, which was destroyed in the fire, estimate ending inventory using the 2013 and 2014 dollars and percentages (**Method #1: Cost of goods sold to gross receipts ratio**).

- a. Because you did not observe the inventory, estimate the ending inventory for 2015 by:
  - i. Averaging the 2013 and 2014 cost of goods sold and 2013 and 2014 gross receipts, and then dividing the average cost of goods sold by the average gross receipts. You cannot use an average of an average (e.g., Cost of goods sold/Gross receipts ratios for 2013 and 2014), which can distort the average. You must calculate the average for each and then the Cost of goods sold/Gross receipts ratio.
  - ii. Multiply the resultant percentage from 3.a.i. by the 2015 gross receipts to get an estimated 2015 cost of goods sold total in dollars.
4. How does the estimated ending inventory impact the individual income tax return ending inventory, cost of goods sold, net profit, and net income? Find out by adding an additional column for 2015 and recalculate cost of goods sold using the estimates calculated above. Every number in that column is identical to the recorded 2015 column except estimated inventory, cost of goods sold, gross profit, and net profit.
5. Compare your recalculated ending inventory to that given to Sharptop Bank and to Southern Appalachian Insurance. Is either estimated ending inventory materially different from that reported on the 2015 IRS Schedule C?
6. *OPTIONAL (extra credit points determined by professor)* Because you did not observe the inventory, which was destroyed in the fire, estimate ending inventory by rolling the October 31, 2015, physical inventory totals forward (**method #2**):
  - a. Starting with the October 31, 2015, physical inventory, roll the inventory forward at cost by adding the purchases from November 1, 2015, through December 31, 2015 (according to the various wholesaler purchase records), to the December 31, 2015, physical inventory totals. This results in the inventory available for sale during 2015.
  - b. Then, reduce the inventory available for sale by the sales from November and December 2015 Georgia Sales and Use Tax Returns. Note: These sales are at retail price and must be reduced to wholesale cost. Use the Cost of goods sold/Gross receipts ratio determined in 3.a.i.
7. *OPTIONAL (extra credit points determined by professor)* Go to a business library or university librarian and locate RMA Annual Financial Statement Studies or a similar publication and locate convenience stores and comparable ratios (e.g., cost of goods sold to total revenues). How does the cost of goods sold to total receipts ratio in that publication compare to the ratios on the 2015 IRS Schedule C?



## Exercise 2: Individual Assignment

1. Input information from the SBA Personal Financial Statements given to Sharptop Bank into a spreadsheet.
  - a. Separate personal items (e.g., residence) from business items (e.g., inventory).
  - b. Calculate common-sized percentages (divide each number by gross receipts for income statement items and total assets for balance sheet items for that particular year).
  - c. Review the dollars horizontally across the three years and vertically down each year and identify any material irregularities.
  - d. Review the percentages horizontally across the three years and vertically down each year and identify any material irregularities.
  - e. Trace business items (e.g., accounts payable) to information provided by suppliers (e.g., fuel, groceries, beverage, tobacco, and print media sales summaries). Calculate any differences.
  - f. Compare the reported inventory to the income tax returns and proof of loss (e.g., ending inventory). Calculate any differences.
2. If the tax return or insurance claim is misstated, did Greg Larsen commit some form of financial statement fraud?
3. What accuracy certifications on the tax return and bank financial statement address providing materially inaccurate information?
4. Was Larsen Convenience solvent on January 7, 2016? Solvency is defined three ways: (a) having more assets (particularly current assets) than liabilities (particularly current liabilities), or (b) Larsen Convenience cannot pay its debts when the dates come due, or (c) both (a) and (b).
5. How does Greg Larsen's business solvency impact his wife Tonya Larsen?

## Exercise 3: Group Assignment—Writing Report and Associated Schedules

1. Prepare a final examination report to the attorney for Southern Appalachian Insurance and an accompanying set of schedules.
2. Prepare court-ready audiovisuals (e.g., one-page chart of talking points, summary schedule of the categories of the alleged material misstatements or omissions, comparative bar chart of a single item like ending inventory or net profit). Reference the schedules and audiovisuals in the report.

**1-4 EXERCISE TEMPLATES**

**Larsen Convenience Store—Exercise #1**

**Financial Statement Fraud, Exercise #1 — Template**

	From Schedules C (AS REPORTED)						REVISED based on Estimated Ending Inventory	
	2013	%	2014	%	2015	%	2015	%
<b>Revenue</b>								
Fuel revenue								
Beginning inventory								
+ Purchases								
= Ending inventory								
Cost of fuel								
Gross profit								
Groceries/food revenue								
Beginning inventory								
+ Purchases								
= Ending inventory								
Cost of groceries								
Gross profit								
Beverages revenue								
Beginning inventory								
+ Purchases								
= Ending inventory								
Cost of beverages								
Gross profit								
Tobacco revenue								
Beginning inventory								
+ Purchases								
= Ending inventory								
Cost of tobacco								
Gross profit								
Print media revenue								
Beginning inventory								
+ Purchases								
= Ending inventory								
Cost of print media								
Gross profit								
Bank ATM rents								
Beginning inventory								
+ Purchases								
= Ending inventory								
Cost of bank ATM rents								
Gross profit								
<b>Total revenue</b>								
Beginning inventory								
+ Purchases								
= Ending inventory								
<b>Total cost of goods sold</b>								
<b>Total gross profit</b>								
<b>Expenses</b>								
Administration fee								
Advertisement								
Cash over/short								
Credit card fees								
Rent expense								
Equipment station repair								
Expense items								
Insurance								
NSF checks expense								

Payroll tax expense				
Permits/legal				
Salaries				
Taxes				
Utilities				
Total All Expenses				
<b>Net Profit (REPORTED)</b>				
<b>Net Profit (REVISED)</b>				-
<b>Difference (Reported, Less/ Estimated)</b>				

(a) Ending Inventory Is Estimated using Cost of Goods Sold/Gross Receipts Method				% PROOF
	2013	2014	2013-2014 Avg.	2015 (Estimated)
Cost of groceries				
Gross Revenue - Groceries/Food				
	2013-2014 Percent COGS/Gross receipts			
Cost of beverages				
Gross Revenue - Beverages				
	2013-2014 Percent COGS/Gross receipts			
Cost of tobacco				
Gross Revenue - Tobacco				
	2013-2014 Percent COGS/Gross receipts			

DAYS SALES OF INVENTORY CALCULATION				% PROOF
	2013	2014	2015 (Reported)	2015 (Estimated)
<b>TOTAL INVENTORY</b>				
Inventory	\$ -	\$ -	\$ -	\$ -
/ Cost of Sales				
X 365 Days Sales of Inventory				
<b>GROCERIES INVENTORY</b>				
Inventory				
/ Cost of Sales				
X 365 Days Sales of Inventory				
<b>BEVERAGES INVENTORY</b>				
Inventory				
/ Cost of Sales				
X 365 Days Sales of Inventory				
<b>TOBACCO INVENTORY</b>				
Inventory				
/ Cost of Sales				
X 365 Days Sales of Inventory				

OTHER INCOME TAX RETURN INFORMATION - NOT IN SCHEDULES C			
	2013	2014	2015 (Reported)
Wages, salaries			
Interest			
Estimated Tax Payments			

## Larsen Convenience Store—Exercise #2

### Financial Statement Fraud, Exercise #2 — Template

January 2014, 2015, 2016 Financial Statements

Larsen Convenience

Source: Sharptop Bank

1.a. - 1.b.	As Given (Reported) to Sharptop Bank			REVISÉD (Per Source Docs.) 1/7/2016
	1/7/2014	1/7/2015	1/7/2016	
Residence - 213 Underwood Street, Canton, Georgia				
Cash - Savings				
Cash - Sharptop Bank (Larsen Convenience)				
2011 Jeep Grand Cherokee				
2014 Ford F-150				
Household goods				
Leasehold improvements				
Inventory (Larsen Convenience)				
Total assets	\$ -	\$ -	\$ -	
Credit card - Sharptop Bank				
Automobile loan - Sharptop Bank				
Truck loan - Sharptop Bank				
Accounts payable - Shamrock Groceries				
Accounts payable - Discount Tobacco Supply				
Accounts payable - Marietta Beverage Co.				
Accounts payable - Georgia-Tennessee Fuel				
Accounts payable - Jenkins Media Services				
State sales and use taxes payable				
SBA note payable				
Mortgage - Integrity Mortgage				
Total liabilities	\$ -	\$ -	\$ -	
Total equity	\$ -	\$ -	\$ -	
Total liabilities and equity (equals total assets)	\$ -	\$ -	\$ -	
	<b>Business Assets &amp; Liabilities Only</b>			
	1/7/2014	1/7/2015	1/7/2016	
Cash - Sharptop Bank (Larsen Convenience)				
Leasehold improvements				
Inventory (Larsen Convenience)				
Total assets	\$ -	\$ -	\$ -	\$ -
Accounts payable - Shamrock Groceries				
Accounts payable - Discount Tobacco Supply				
Accounts payable - Marietta Beverage Co.				
Accounts payable - Georgia-Tennessee Fuel				
Accounts payable - Jenkins Media Services				
State sales and use taxes payable				
Note payable				
Wrongful death liability				
Total liabilities	\$ -	\$ -	\$ -	
Total equity	\$ -	\$ -	\$ -	
Total liabilities and equity (equals total assets)	\$ -	\$ -	\$ -	

Personal Assets & Liabilities Only			
	1/7/2014	1/7/2015	1/7/2016
Residence - 213 Underwood Street, Canton, Georgia			
Cash - Sharptop Bank (Tonya)			
2011 Jeep Grand Cherokee			
2014 Ford F-150			
Household goods			
Total assets	\$ -	\$ -	\$ -
Credit card - Sharptop Bank			
Automobile loan - Sharptop Bank			
Truck loan - Sharptop Bank			
-----			
Mortgage - Integrity Mortgage			
Total liabilities	\$ -	\$ -	\$ -
Total equity	\$ -	\$ -	\$ -
Total liabilities and equity (equals total assets)	\$ -	\$ -	\$ -

I.c. - I.d.

**Horizontal and vertical analysis:**

**Business (1/7/16 v. prior years):**

**Personal:**

I.c. - Accounts Payable Under-Statement	Date	Amount	Difference	
Shamrock Groceries per Financial Statement			//////	
Shamrock Groceries per Sales Summary				
Discount Tobacco per Financial Statement			//////	
Discount Tobacco per Sales Summary				
Marietta Beverage per Financial Statement			//////	
Marietta Beverage per Sales Summary				
Georgia-Tennessee per Financial Statement			//////	
Georgia-Tennessee per Sales Summary				
Jenkins Media Sales per Financial Statement			//////	
Jenkins Media Sales per Sales Summary				
				<b>Total Accounts Payable Under-Statement</b>
				\$ -

I.f. - Ending Inventory Over-Statement	Date	Amount	Difference	
Ending Inv. - Estimated			//////	
Ending Inv. - Schedule C				
Ending Inv. - Sharptop Bank				
Ending Inv. - Proof of Loss				
				<b>Ending Inventory Over-Statement</b>
				\$ -

2

If the tax return or insurance claim is misstated, did Greg Larsen commit some form of financial statement fraud? If so, what kind of fraud? Explain.

3

What accuracy certifications (e.g., penalties of perjury, false statements) on tax return and bank financial statement address materially inaccurate information?

4

Was Larsen Convenience solvent on January 7, 2016? Explain.

5

How does Greg Larsen's solvency impact Tonya Larsen?

## 1-5 REVIEW QUESTIONS—FRAUDULENT FINANCIAL STATEMENTS (LARSEN CONVENIENCE STORE)

1. In the case scenario, Greg Larsen lost a wrongful death lawsuit for killing his nephew and is required to pay \$500,000. The Georgia Supreme Court denied certiorari in May 2015 to hear an appeal to overturn the appellate court's affirmation of the lower court decision. When should the \$500,000 judgment be shown on Larsen's personal financial statements?
  - A. Subsequent to September 2013, when the state court judge handed down his decision.
  - B. After October 2014, when the appellate court affirmed the lower court.
  - C. Subsequent to May 2015, when the Georgia Supreme Court denied certiorari.
  - D. He should have listed the \$500,000 as a debt on all personal financial statements filed after September 2013.
2. Which types of financial statements do not have certifications about the accuracy of information listed on or submitted with the financial statements?
  - A. Income tax forms (e.g., IRS Forms 1040, 1065, and 1120)
  - B. Unaudited financial statements
  - C. Credit applications or financial statements given to financial institutions
  - D. Sworn statements in proof of loss submitted to insurance companies
3. In calculating common-sized ratios in a vertical and horizontal analysis, what is the base for calculating common-sized ratios for the balance sheet?
  - A. Total assets
  - B. Gross receipts
  - C. Total liabilities
  - D. Retained earnings
4. When compared to prior years' income statements (IRS Schedules C), the IRS Schedule C for the year ending 2015 shows net profit (and associated income taxes on the net profit) that far exceed prior years. In short, Greg Larsen had his best year yet. Based on that net profit and associated income taxes, you:
  - A. Do not have to further investigate his finances because only a fool would overstate his/her net income and pay more income taxes than required.
  - B. Should investigate Greg Larsen's finances further because his net income may be overstated (net income is easily overstated in a number

- of ways including overstating ending inventory, which understates cost of goods sold and overstates gross income and net income).
- C. Need to investigate further because Greg Larsen's primary suppliers made him sign promissory notes for unpaid balances.
  - D. Both B and C.
5. In calculating common-sized ratios in a vertical and horizontal analysis, what is the base for calculating common-sized ratios for the income statement?
- A. Gross receipts
  - B. Total assets
  - C. Total liabilities
  - D. Retained earnings
6. When analyzing financial statements (e.g., unaudited financial statements and income tax returns), which of the following is correct?
- A. Vertically analyze only the dollars.
  - B. Vertically and horizontally examine just the common-sized percentages looking for irregularities.
  - C. Vertically and horizontally analyze for anomalies in dollars and by percentages.
  - D. Scan for irregularities of all kinds.
7. In conducting a vertical and horizontal analysis, you can estimate the impact of irregularities (e.g., material differences in inventory balances) by:
- A. Materially changing a suspected anomaly like ending inventory on a financial statement (e.g., the Balance Sheet) and determining its impact on related financial statements (e.g., the Income Statement and Statement of Retained Earnings).
  - B. Estimating the impact of the suspected irregularity by calculating what the anomaly would have been using prior-period information, ratios, and benchmarks.
  - C. Calculating the impact of the suspicious abnormal number by rolling forward the number from prior accounting periods using verifiable information like sales reported to taxing authorities and purchases from vendors.
  - D. All of the above.

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