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A Case of Declining Gross Margins

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ABSTRACT: Based on the facts of an actual fraud investigation and utilizing dialog to creatively present materials that will hold the student's interest, this case introduces students to financial statement fraud and highlights the internal controls of inventory and sales for a private business. It provides students the opportunity to complete financial statement analysis relating to gross margins, and students are asked to identify weaknesses in the company's internal control system. Students are also asked to make recommendations for improvement in the form of a written memo. The case is simple but can be used to introduce the concept of fraud investigation and can stimulate lively classroom discussion concerning student perceptions of whether fraud is, in fact, taking place. It can be used with either introductory-level financial accounting classes or more highly developed accounting courses such as auditing or fraud examination.

Keywords: financial statement analysis; internal controls; segregation of duties; fraud examination; fraud triangle.

INTRODUCTION

Fraud is a continuing problem in today's workplace and is very costly for both privately and publicly held companies. In the *2008 Report to the Nation*, the Association of Fraud Examiners estimates that an organization loses 7 percent of its annual revenues to fraud, and an estimated $994 billion is lost to fraud in the United States alone. Since the publicity surrounding the financial statement frauds of WorldCom and Enron, there has been an increased awareness of occupational fraud schemes and, thus, more attention to the prevention of fraud and improvement of organizational internal controls. With the implementation of the Sarbanes-Oxley Act of 2002 and the creation of the Public Company Accounting Oversight Board (PCAOB), a greater emphasis has been placed on the detection of material misstatements in a company's financial statements, whether caused by fraud or error. The issuance of the AICPA Auditing Standards Board's *Risk Assessment Standards*, along with the PCAOB's *Proposed Auditing Standards Related to the Auditor's Assessment of and Response to Risk*, has done much to provide direction on audit procedures relating to risk assessment and on auditor responsibility for considering fraud risk during the audit process.

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Based on the facts of an actual fraud investigation and utilizing dialog to creatively present materials that will hold the student's interest, this case highlights internal controls of inventory and sales for a private business and allows the student to address potential issues relating to reported gross margin and identify possible weaknesses in the internal control system. Additionally, students are asked to identify the risk of fraud in the workplace and must evaluate whether fraud is, in fact, taking place.

CASE SCENARIO

George Larsen will never be accused of having a dynamic presence. The bespectacled accountant spread 145 pounds over a 5′7″ frame and, if you even noticed George, his baby face and full head of short, brown hair gave the look of a college student absorbed with how to survive finals week. But, looks can be deceiving. The 35-year-old son-in-law of the town's wealthiest man is the president and the driving force behind Sturgis Enterprises, one of the nation's largest, privately held gift wholesalers.

Certainly, marrying the owner and chairman of the board's daughter didn't hurt George's ascent through the ranks of Sturgis Enterprises. His ability to quickly grasp numbers and their relationships to the gift business, though, was the overriding reason George became president and chief operating officer (COO); his marriage to Jim Sturgis' only daughter was why he achieved his current position at the young age of 29.

Now, as George Larsen met with Jim Sturgis to discuss the owner and chief executive officer's (CEO) concerns with the latest financial statements of the company, it became, once again, apparent to George why he needed to break away from his father-in-law and start a business of his own. When Jim Sturgis failed to understand the financials of the company or got a half-baked idea about someone stealing money, George was subjected to tirades of epic proportions. Jim Sturgis knew how to design and sell innovative gift products, but he knew nothing about how to manage corporate finances—a fact that he often failed to recognize. This led to hours of listening to the rants and raves about the financial health of the company.

> "At times, I wonder what my daughter sees in you!" Jim Sturgis yelled. "I've spent 30 years building this company. I've got the two hottest products in the gift market today. Then I look at the preliminary financials that your wonder boy accountant gives me and our profits are pathetic. Can you explain that to me?"

> "With all due respect, Mr. Sturgis, the 2008 figures are only preliminary numbers. Every year there are reclassifications and accrual adjustments that are made by Andy, our wonder boy accountant, as you call him. Afterwards, I review the financials. You've never looked at the preliminary financials in the past, so I can see why you might be confused. Until these adjustments are completed, let's not jump to the conclusion that our financial results are disappointing. I will admit, though, gross margins have decreased slightly over the past few years."

> "I don't know how many of these adjustments you're expecting to make, but I'd better see a more positive bottom line when you are done! And when you begin your clarification of these numbers, you can first explain why my gross margin appears to be down. I can't go to the bank and ask for a larger credit line with these financials! How do I explain to my ultraconservative banker that I've increased sales but made less money per sale? He's been on me to spend money for an outside audit, and if he sees these numbers, I'll have to agree. I don't want to spend money on an audit!"

> "Well, I don't agree with your banker," George responded to Jim's tirade. "I'm not sure an audit is necessary."

> "Okay, then why don't you explain to me about our gross margins and how you are going to fix it so I don't have to spend money on an audit? That's why I have an accounting department!"

"It's not quite that simple," George replied to get Jim off the subject of spending money on an audit. "It's true that our gross margin as a percentage of sales has declined over the last five years, but the company's net operating income has increased. You are actually making the same amount of money, as a percentage of sales, as you were five years ago."

"That's great, but I still don't get it. What about the gross margin percentage? Obviously, it is declining! I've negotiated better contracts with our vendors, improved the quality of our product to reduce returns, used fewer outside artists in designing new products, and I am making less per item sold than I did five years ago. How can that happen?" Jim demanded.

George laughed to himself. Prior to George coming to work at Sturgis, Jim couldn't tell the difference between gross margin and a gross of pens. "Maybe I should have left him in the dark," George thought, as he continued to listen to Jim's hysterics.

"Again, Jim, I won't have a complete answer until the financials are finalized."

"But do YOU understand what I'm saying? We have a product that is receiving national publicity and another that is in the top five best sellers at Toys 'R' Us. Because of the volumes for these products, I reduced our costs at the factories in China and I've been able to avoid deep discounts that are generally given to the major retailers. Even Wal-Mart is getting less than a 20 percent discount on my wholesale price for these items. So, maybe I don't understand the financial statements, as you've pointed out on numerous occasions, but I know I'm still getting a good price for my product. I'm reducing costs from my vendors, but my gross margins are still going down. That doesn't make sense to me. So are the cost of sales numbers one of your glorious '*reclassifications or adjustments*' that need to be made?" Jim completed his tirade.

"Actually, it could be," George responded. "It's always possible that a clerk has set up an account as cost of goods sold instead of a supplies account. Or it could be there is a need for an inventory adjustment. We always have inventory discrepancies between our yearly physical count and the inventory shown in our system. That's why I need to go over the numbers before we finalize the statements. But, I should also add that when you say we are avoiding deep discounts from major customers, you fail to realize we still are giving a larger discount to these major customers than we did to other customers in the past. I'm well aware material costs have been reduced because I approve all purchase orders for the product you buy from China. But, the price you pay for product is just one component of the cost of goods sold. You also have to include shipping costs, tariffs, custom charges, and commissions to our agents to buy the product. These costs have all gone up."

Ignoring George's reply concerning the cost of good sold components, Jim spouted,

"We might have an inventory adjustment?! Good grief, George, I've spent thousands of dollars in upgrading the inventory software and you tell me we have inventory adjustments. How does that happen?"

"We still have to take a physical count at year-end to verify our inventory," George replied. "As we discussed before, clerks make input errors, counts can be wrong from our vendors that we don't catch, and other administrative errors can cause the physical inventory to vary from the inventory we show in the computer."

"Or maybe you recommended the wrong inventory software," Jim said in disgust.

"The software is not an issue. If you remember, your high school buddy, Bill, who runs the warehouse, is a self-proclaimed computer whiz. He made the recommendation on the software."

Suddenly, Jim's demeanor lightened as he changed the subject. "How is Bill doing?" Jim inquired about the 25-year warehouse supervisor, Bill Watson.

"Oh, I think he's doing as well as anyone could in his position. You know him better than I do, but I don't know how I would handle the loss of my wife," George answered.

"Yeah, I've known Bill longer than you, but I'm not sure I know him any better. He's always stayed to himself. He didn't even bother to tell me until last week that his oldest son was studying to be an attorney at some high-powered, high-dollar college. Quite honestly, I didn't think his son was that smart," Jim surmised.

"Well, all I know is that Bill missed very little work after his wife died. During that time, I had to get quantities from him to place the product purchase orders and he never missed getting me the information."

"He's old school, George. He takes his work to heart and he does what has to be done. I should stop in on Bill to see how he's doing."

"At the risk of reopening a can of worms, are we finished here?" George asked as he realized a lecture on the poor work ethic of the younger work force was coming. When Jim mentioned "old school," he was warming up to expound upon his beliefs that his generation was the last bastion of the American work ethic that founded this nation.

"No, we're not finished. I'm still disturbed about this gross margin number," Jim jumped back into his dictator role.

"Can't we finish this after the final financial statements are prepared?" George pleaded.

"No, we can't. Adjustments or no adjustments, I need to get a better understanding of our inventory control system before we go any farther," Jim continued.

"Okay, but I explained all of it to you when we computerized our inventory system over five years ago."

"Humor me. I've trusted you to take care of the business for so long that I think it would be beneficial if I took some time to understand exactly what we are doing around here," came the emphatic reply from the obviously angry owner.

"I'll be glad to," responded the agitated president. "Let me start by sketching the system to visually show you how we account for inventory and sales. But before I begin explaining, I'm reminding you again there are discrepancies between the physical inventory count and the inventory that is shown in the computer. I've spent hours investigating why there are discrepancies and, aside from actually counting the inventory myself, I've come to believe that the temporaries I hire to count the inventory are not doing their jobs. If you would give me a larger personnel budget for administrative staffing, I could hire a full-time inventory clerk to monitor the temporaries and check for discrepancies more often than once a year."

"How will that make a difference?" Jim asked.

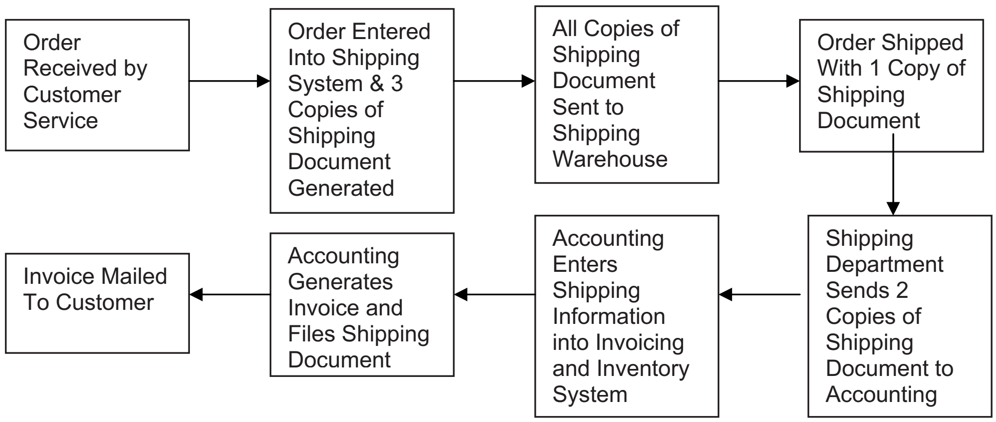
"If I have a full-time inventory clerk, I can take a physical inventory of systematically selected items more often than once a year. In other words, a full-time inventory clerk could take annual physical counts along with counts of selected items on a monthly basis. Plus, I wouldn't have to review inventory counts from the temps to reconcile the ending inventory in our software."

"I get the picture," Jim replied as he continued to show signs of being irritated with his son-in-law. "Let's get to the inventory system."

George took a pad of paper from Jim's desk and proceeded to draw a depiction of the Sturgis Enterprise inventory control system as seen in Figure 1.

"As you can see," George began his narrative, "upon receiving an order, shipping documents are generated (see Figure 2). These documents are sent to the warehouse and are used to communicate the items that should be pulled to fill each order. Upon filling the order, the warehouse writes on their copy of the shipping document the quantity of items shipped by item number, and then sends the original shipping document to the customer as the packing slip. A copy is sent to accounting to

FIGURE 1
Sales Flowchart



use for invoicing and, in turn, updating the inventory. When accounting receives the paperwork, the shipping information is entered into the invoicing program, which generates an invoice that is mailed to the customer and automatically adjusts the inventory. This '*computer count*' is what has differed periodically from the physical counts. Does that make sense?"

"Yes, it does make sense. I do have some understanding of our business. George. It appears that you need to get with Bill and come up with some explanations. I'll expect your answer within the next two days," Jim announced as he waved his hand to dismiss his son-in-law.

CASE QUESTIONS

1. Are Jim Sturgis' concerns of declining gross margins valid given the increase in sales and steady reported net income over the past five years? In addition to the gross margin and net income percentages that are provided in Table 1, what other performance measures could be calculated to help isolate the problem of declining gross margins?
2. George Larsen suggested to the owner that the 2008 income statement numbers were "only preliminary." Is his statement logical? Do companies make routine adjustments of inventory? Explain.
3. Refer to Table 1 and assume you are a student intern working part-time in the accounting department for Sturgis Enterprises. George has asked you to prepare a memo to the CEO explaining the possible explanations for the decrease in the gross profit percentage over the past several years. Include in your memo a detailed discussion of the increase in sales, cost of goods sold, and the impact on cost of good sold and gross profit due to under- or over-stated ending inventory.
4. Discuss the importance of taking physical counts of inventory. In general, what controls should an organization have in place to effectively prevent the misstatement of inventory?

FIGURE 2
Example Shipping Document

Sturgis Enterprises | **Sales Order**

1234 S. Main Street
Eureka, CA 95501
Phone: (707) 555-0141
Fax: (707) 555-0142
E-mail: customersupport@sturgisenterprises.com

Sales Order No: 050712
Sales Order Date: 07/01/08

Bill To:

Innovative Gifts
1234 Burntwood Street
Birch Bay, WA 98230
USA

Ship To:

Innovative Gifts
1234 Burntwood Street
Birch Bay, WA 98230
USA

PO Number	07010805	**Backorders**	No
Sales Person	Steve Sellers	**Payment Terms**	Net 30
Ship Date	07/08/05	**Cancel Date**	08/01/05
Shipping Method	United Parcel Service Ground	**Contact Name**	Kim Belamy
Notes	Free shipping for order over $500.00	**Phone Number**	(360) 371-5000

Qty.	**Item**	**Description**	**Unit Price**	**Discount**	**Line Total**
10	Flagpole	Tangle-Free Flagpole	$19.95		$199.50
5	Remote	Talking Remote Control	$34.95		$174.75
4	Tool Set	Ergonomic Tool Set	$28.95		$115.80
2	Radio	Shower Radio	$62.95		$125.90
				Subtotal	$615.95
				Discount	$ 0.00
				Sub Total	$615.95
				Shipping	$ 0.00
				Total	$615.95

TABLE 1

Sturgis Enterprises

Income Statement Year Ending 12/31 (×$1000)

Year*	**2004**	**2005**	**2006**	**2007**	**2008**
Sales	$11,874	$15,436	$19,873	$25,835	$33,585
COGS	3,448	4,827	6,788	9,563	15,314
Gross Margin	$8,426	$10,609	$13,085	$16,272	$18,271
Gross Margin %	71.0%	68.7%	65.8%	63.0%	54.4%
Operating Expenses:					
Wages	$3,705	$5,308	$6,256	$8,227	$9,577
Other	3,943	4,391	5,685	6,329	6,572
Total Expenses	$7,648	$9,699	$11,941	$14,556	$16,149
Income Before Interest & Taxes	$778	$910	$1,144	$1,716	$2,122
Interest Expense	$89	$131	$164	$215	$195
Income Before Taxes	$689	$779	$980	$1,501	$1,927
Tax Expense	$34	$48	$54	$81	$88
Net Income	$655	$731	$926	$1,420	$1,839
Net Income %	5.5%	4.7%	4.7%	5.5%	5.5%

*2004–2007 are final statements after adjustments. 2008 is before adjustments.

Sturgis Enterprises Cost of Goods Sold Data Year Ending 12/31 (× $1000)

	2004	**2005**	**2006**	**2007**	**2008**
Beginning inventory	$751	$849	$1,360	$1,533	$2,519
Purchases of inventory	3,546	5,338	6,961	10,549	17,120
Goods available	4,297	6,187	8,321	12,082	19,639
Ending inventory	(849)	(1,360)	(1,533)	(2,519)	(4,325)
Cost of Goods Sold	$3,448	$4,827	$6,788	$ 9,563	$15,314

5. A system of internal control consists of policies and procedures designed to provide management with reasonable assurance that a company achieves its objectives and goals. Segregation of duties is a control procedure that is instrumental in the prevention of intentional or unintentional misstatement and/or fraud. Discuss the segregation of duties concept as it relates to fraud and any violations that appear in the case.
6. Examine Figure 1 and identify the deficiencies in the sales flowchart. Make recommendations for improving the sales flowchart by using either a descriptive internal control analysis or revise the diagram using flowcharting symbols.
7. Assume that Jim Sturgis is interested in investigating the reasons for the percentage decline in gross profit as a percent of sales. He has read the memo you prepared in question (3) and believes he has a better grasp of the information reported on the income statement. Although you are simply an intern, you suggest to the CEO that he contract an independent accounting firm to conduct an audit. In addition, your uncle, Larry Beagle, is

a Certified Fraud Examiner (CFE) and, depending on the final results of the audit, you think it may be beneficial for Mr. Sturgis to consider hiring a local CFE to investigate possible reasons behind the lower-than-anticipated annual gross margins.

Mr. Sturgis is still concerned about the cost of an audit, and given the level of trust among Jim and his employees, he initially scoffs at the idea of a possible fraud taking place. However, he is worried about the financial results of the past five years and decides an audit may be appropriate.

(a) What is the purpose of an independent audit?
(b) If fraud is present at Sturgis Enterprises, wouldn't an audit reveal any misrepresentations or misappropriations? (Note: In addition to a general discussion, higher-level accounting students could discuss the requirements of Statement on Auditing Standards No. 99.)
(c) Are fraud investigations the same as audits? Explain.

8. Utilizing the fraud triangle, identify an employee or employees from the case that might have the motive and opportunity to commit fraud.
9. What is fraud examination? How does occupational fraud and abuse differ from other types of fraud?
10. Assume that you are Mr. Beagle and have been asked to investigate the possibility of an inventory fraud. What steps would you take? What type of inventory schemes should Mr. Beagle consider?
11. After completing your analysis and review of fraud examination concepts, do you believe that fraud is present at Sturgis Enterprises? Explain your answer.

CASE LEARNING OBJECTIVES AND IMPLEMENTATION GUIDANCE

Courses

Auditing
Financial Accounting
Fraud Examination

Topics and Learning Objectives

Financial Statement Analysis
Internal Controls
Segregation of Duties
Fraud Examination
Fraud Triangle

Statement of Learning Objectives

This case is based on an actual fraud investigation and can be utilized by accounting students studying at various levels. It can be assigned to introductory financial accounting students as an exercise in financial statement analysis, and may also be used for stimulating fundamental discussions surrounding the importance of an organization's internal controls and segregation of duties. In particular, students are asked to address the concerns relating to declining gross margins given a five-year period of increasing sales with steady reported net income. Students are then asked to take the analysis one step further by completing an explanation of results in the form of a written memorandum to the company owner. The written-memo requirement is similar to the sort of correspondence required in the simulation portion of the current CPA exam, but first-year accounting students also benefit from the written requirement. Ratio analysis is encouraged as a means for lending support to student recommendations and/or conclusions.

Lower-level, as well as more advanced, accounting students have a natural interest and curiosity when discussing the concept of fraud. From the facts of the case, it is not immediately obvious that fraud has taken place, but the case questions provide students the opportunity for both an introduction to the concept of occupational fraud and the nature of fraud schemes, including the theory of the fraud triangle (as identified in Statement on Auditing Standards No. 99).

The case is written in an entertaining format and after reading, and with instructor guidance, classroom discussion is lively. For more advanced-level students, a further in-depth opportunity for critical analysis is provided by asking students to review the guidelines of strong internal controls and complete a flowchart on the internal controls of inventory. Students are not only introduced to the importance of fraud prevention rather than detection, but students are also motivated to discuss the behavioral red flags that are often displayed by fraud perpetrators and demonstrated in the case.

Even though the basis of the case is built around an actual fraud investigation, many of the case specifics have been added to help enhance student learning and facilitate the flow of classroom discussion. Ideally, the case should be utilized in either an auditing or fraud examination course since students will have the necessary knowledge base to address most of the questions. As previously mentioned, however, parts of the case have been utilized in first-year financial accounting courses as an example of internal control violations and the importance of segregation of duties. In addition, introductory financial students can be stimulated to think about the effects of inventory errors or misrepresentations on cost of goods sold, gross margin, and net income.

Implementation Guidance and Teaching Methods

The suggested time frame for this case is up to one 50-minute class period or possibly two class periods, depending on the concentration of the case review and the level of student knowledge. This case has been used in a fraud examination class as an in-depth review of auditing topics and as a tool for student application of the fraud triangle. In addition, parts of the case have been used in both principles of financial accounting classes and an auditing course. The case questions are designed to be assigned in parts or as a whole. Questions 1 through 4 are more elementary, while questions 4 through 9 require more in-depth accounting knowledge.

Instructors can use the case as an in-class assignment that includes dividing students into teams for group discussion of the case questions. Each group can also be assigned a separate question or topic to address. The utilization of group settings is especially beneficial since many times, students learn the most when they can take an active part in learning. Many students resist group or team projects—especially if the project is an out-of-class assignment or past experiences have resulted in teammates who "did not pull his/her weight." But in-class group work can actually stimulate individual discussions and be less intimidating for students who fear speaking in front of an entire class. If the instructor prefers individual student work, the entire case with questions can be assigned as out-of-class or weekly homework.

Instructor Input/Feedback

This case evolved over several semesters and was initially used as an attempt to bring a real-life situation into a classroom setting. Students seemed to enjoy the background of the case and follow-up discussions were lively. From there, peer instructors were invited to try the case and, after a few semesters of useful feedback, the document went through several drafts and the current version is presented in this case. As previously mentioned, this case was originally derived from an actual fraud investigation that was concerned with missing inventory. As instructors used the case, however, it became evident that it is a good tool to use for improving students' knowledge of gross margins and other discussion questions developed, such as those relating to internal controls and fraud-specific topics.

Evaluations by instructors who have used the case in its current form indicate the following:

1. *The case is a very good tool in providing students an understanding of gross margins and the relationship of gross margins to sales and cost of goods sold*. A principles of accounting professor who uses the case believes that students seem to "pay more attention" when a fraudulent situation is presented to them in explaining fundamental relationships on the income statement. Students find the exercise enjoyable and are motivated through instructor-led discussions.
2. *Assigning each student to read the case prior to class enhanced interaction within each student group during the in-class project*. It is a challenge to keep all the students interested during in-class projects, but an auditing professor who uses the case reported the groups are very intrigued by the case. Each group, however, needs to prepare for the project before coming to class. In a previous semester, the professor did not assign the reading in advance, but instead had each group read and address selected questions during one class period. The comment this professor made after her initial use of the case was, "I need to require more out-of-class preparation to ensure more detailed and relevant in-class discussion."
3. *The flexibility of the case for use in both principles of accounting and auditing is an advantage to using the case*. A professor in a smaller institution who teaches both principles of accounting and auditing said, "I liked the fact I could review one case and come up with a project for two difference courses."
4. *It is helpful if instructors provide students with suggested readings prior to assigning the case*. Initially, students were asked to address the case questions and were told, in general, that additional outside research may be required. Only the most ambitious of students actually made the effort to locate additional materials. Feedback from instructors

suggests the case is completed more adeptly when specific out-of-class readings are assigned to accompany the case.

TEACHING NOTES

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