

Auditing Revenue and Related Accounts

The overriding objective of this textbook is to build a foundation to analyze current professional issues and adapt audit approaches to business and economic complexities. Through studying this chapter, you will be able to:

LEARNING OBJECTIVES

- 1 Explain the concept of accounting cycles and their impact on audit approaches, and identify the accounts in the revenue cycle.
- 2 Discuss the importance of proper revenue recognition and the characteristics of revenue-related fraud.
- 3 Describe the major types of fraud and misstatements that have occurred in the revenue accounts.
- 4 Describe how to use analytical procedures to identify possible misstatements in the revenue cycle.
- 5 Assess inherent and control risk regarding revenue cycle accounts.
- 6 Use audit procedures to test the effectiveness of controls in the revenue cycle.
- 7 Link the auditor's control risk assessment to the development of substantive tests of accounts in the revenue cycle.
- 8 Describe the factors that influence the effectiveness and efficiency of audits of account balances.
- 9 Apply auditing concepts to test revenue.
- 10 Apply auditing concepts to test accounts receivable.
- 11 Describe fraud indicators in the revenue cycle and related audit procedures.
- 12 Evaluate the adequacy of a client's allowance for doubtful accounts.

CHAPTER OVERVIEW

This chapter illustrates the audit concepts developed in Chapters 4 through 9 by applying them to the accounts in the revenue cycle. Sales transactions are always material to a company's financial statements and often are subject to manipulation. Many audit failures have been characterized by misstatement of sales. Because sales are often subject to misstatement, special attention is paid to the control environment and to management's motivation to "stretch" accounting principles to achieve desired revenue reporting.

Once the auditor has assessed environment risk for each significant account balance and related assertions, the audit program for testing account balances is finalized. At this stage of the audit, the auditor should have a good idea where and what types of misstatements might exist in the account balances. The auditor must decide which audit procedures to perform, how extensively those procedures should be performed, and which accounts and account items should be tested. This chapter describes the basic sales recording process, identifies the major documents and controls present in that process, describes the types of revenue-related fraud, identifies approaches to assessing environment risk, and discusses the substantive audit procedures relevant to revenue cycle accounts.

INTRODUCTION

As discussed in Chapter 5, the auditor must assess the risk of material misstatements occurring and going undetected by the client's internal controls (environment risk). The methodology for assessing inherent and control risks, including the testing of controls, and for determining the nature, timing, and extent of substantive testing of account balances in the revenue cycle are illustrated in this chapter.

The Cycle Approach

Typical accounting transactions follow a defined cycle. For example, we tend to view the transactions related to revenue to flow from an initial sale through to the collection of the proceeds from the sale. The cycle concept helps the auditor visualize both the income and balance sheet accounts related to most day-to-day transactions of the organization and thus provides a convenient way to organize accounting transactions for audit testing and evaluation. We use the term **cycle** to refer to the processing of important transactions as these transactions update all the related account balances associated with the transaction. **Revenue cycle** transactions include all the processes ranging from the initiation of a sales transaction to shipping a product, billing the customer, and collecting cash for the sale. The nature of transactions vary with the organization, but most organizations process transactions that can be classified into the following cycles:

- Revenue
- Acquisition and payment of goods and services
- Payroll and related compensation
- Financing: debt and capital
- Cash and short-term investments

Companies will have other processes that may lend themselves to cycle-type characterizations as well. For example, a manufacturing company will likely have a process that tracks inventory costs through work in process to finished goods and finally to cost of goods sold. Most companies have processes related to payroll that identify and record transactions for health-care benefits and pensions. The cycle approach is one way, but not the only way, to assist the auditor in focusing on all important account balances surrounding a transaction to ensure that sufficient audit evidence is gathered, evaluated, and used in reaching conclusions about the correctness of recorded balances.

Overview of the Revenue Cycle

The cycle concept presents a framework for viewing the interrelationship between accounts affected by the same transaction or business activity. Audit evidence verifying the existence and proper valuation of accounts receivable also provides evidence of the existence and valuation of recorded revenue, and vice versa. When examining sales transactions, the auditor also gathers evidence on proper credit authorization and the proper valuation of the recorded transactions. Further, a review of sales contracts provides evidence to analyze the adequacy of the client's warranty expenses and related liability.

Sales transactions often serve as a basis for computing commissions for sales staff. Sales information is used for strategic long-term decision making and marketing analysis. Thus, the accuracy of accounting in the revenue cycle is important for management decisions as well as for the preparation of financial statements.

The accounts typically affected by sales transactions are shown in Exhibit 10.1. The sales process differs with each client, but the commonalities of the revenue cycle can be used to develop audit programs for most organizations. For example, a sale of a briefcase

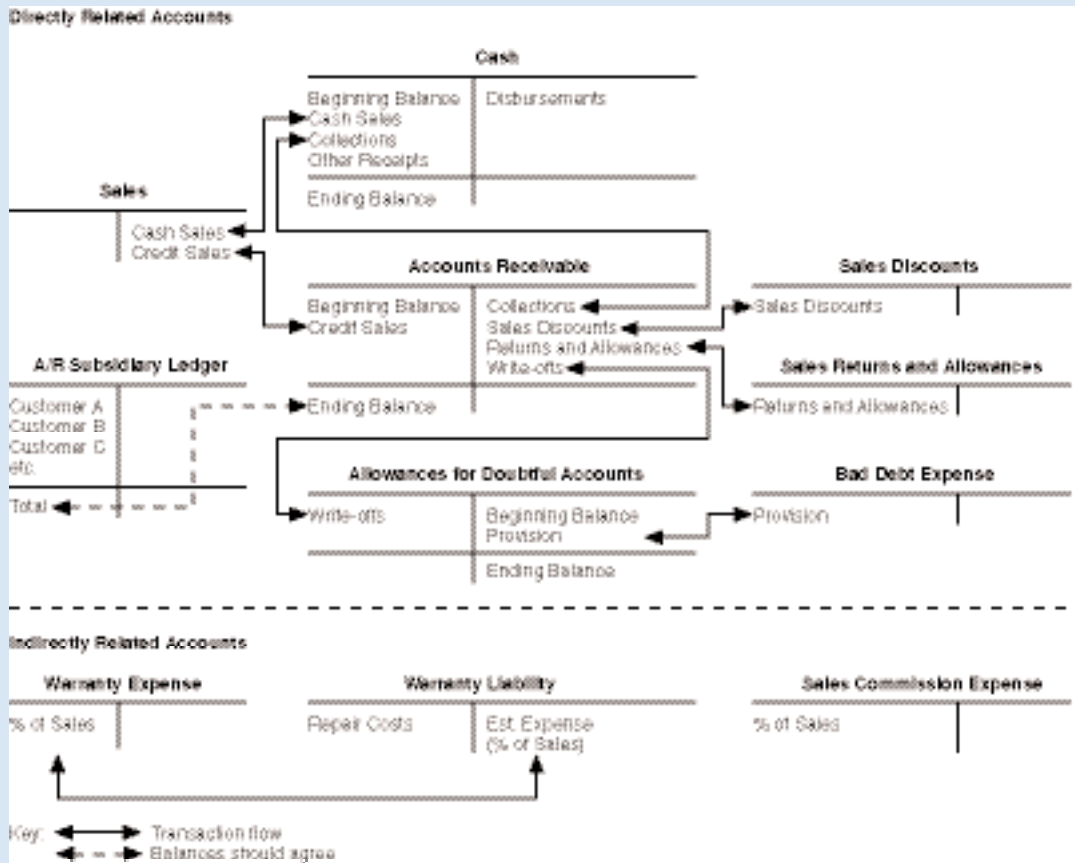
LO 1



The auditor must examine the process of recording transactions to help identify where the greatest risks of misstatements might occur.

EXHIBIT 10.1

Revenue Cycle Accounts



in a department store differs from a sale of construction equipment, and both of these differ from a catalog sale of a lamp placed over the phone or Internet. Some organizations generate paper-based sales documentation; others maintain an audit trail only in computerized form. The control concepts are similar, but the means to implement and document the transactions differ.

INTERNAL CONTROL OBJECTIVES

The control objectives in the revenue cycle are the same as those developed in Chapter 5. The auditor should determine that the design of the system and the implemented control procedures ensure that:

- All recorded transactions have occurred.
- All of the transactions that took place are recorded.
- The transactions have been recorded accurately.
- The transactions have been recorded in the correct accounting period.
- The transactions have been recorded in the proper accounts.

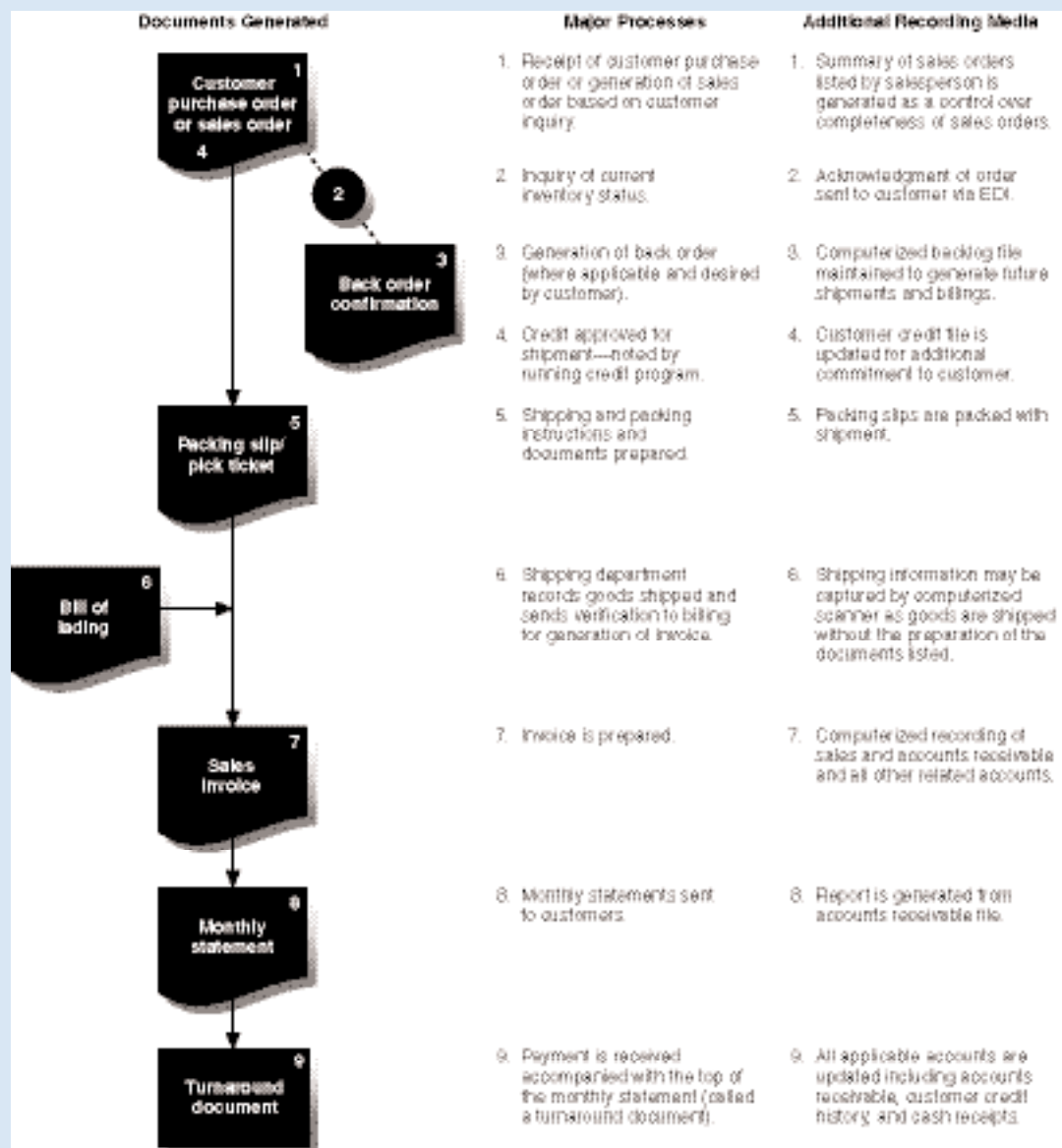
There is not one set of control procedures that apply to all revenue transactions. We will discuss the types of controls the auditor should look for as we illustrate the diversity of revenue recording systems.

THE REVENUE ACCOUNTING SYSTEM

Most sales transactions include the procedures and related documents shown in Exhibit 10.2. But, with computerization, several of these procedures are combined. We use the term documents to apply not only to paper documents, but also to electronic documents that provide evidence of the transaction and the responsibilities of each party to the transaction. The auditor will need to consider the nature of the document (electronic or paper) to determine the specific controls and types of audit procedures needed to verify the effectiveness of the control procedures. For example, a customer's purchase order, the bill of lading (signed by a representative of the common carrier), and a turnaround document (on which the customer writes the amount of payment) are paper-based documents with external validation attributes. On the other hand, a customer may have a

EXHIBIT 10.2

Overview of Sales Process



contract specifying prices and quantities of goods for a year. Instead of a paper purchase order, the customer might submit their planned production schedule electronically to the company for delivery on a just-in-time basis. Shipments may be delivered and unloaded directly into the production line with no bill of lading, and the customer might pay once a month via electronic funds transfer based on production quantities. The control objectives are the same in both the manual and electronic environment, but the audit approaches and the control procedures differ markedly.

RECEIVE A CUSTOMER PURCHASE ORDER Processing begins with the receipt of a purchase order from a customer or the preparation of a sales order by a salesperson. The order might be taken by (1) a clerk at a checkout counter, (2) a salesperson making a call on a client, (3) a customer service agent of a catalog sales company answering a toll-free number, (4) a computer receiving purchase order information electronically from the customer's computer, or (5) the sales department directly receiving the purchase order. The nature and extent of documentation vary considerably. For example, among the order takers just identified, it is possible that none of them will generate a paper document.

The sales order document should contain elements that provide a basis for determining that all transactions are properly authorized and completely recorded. These control procedures include the use of prenumbered sales orders, documentation of authorization, formal approval for credit, a description of part number, sales price, and shipping terms of the products ordered, and an authorized billing address.

Even if a sales order is not physically generated, the same information is recorded in computerized form. Consider a customer service agent for a catalog merchandiser taking an order over the phone. The information is keyed into a computer file, and each transaction is uniquely identified. The computer file (often referred to as a *log of transactions*) contains all the information for sales orders taken for a period of time and can be used for control and reconciliation purposes.

CHECK INVENTORY STOCK STATUS Many organizations have computer systems capable of informing a customer of current inventory status and likely delivery date. The customer is informed of potential backordered items as well as expected delivery date.

GENERATE BACK ORDER If an item is to be back-ordered for later shipment, a confirmation of the back order is prepared and sent to the customer. If the back order is not filled within a specified time, the customer is often given the option of canceling the order. An accurate list of back-ordered items must be maintained to meet current customer demand and future inventory needs. Appending a separate field to the individual inventory records to show back-ordered items usually does this.

OBTAIN CREDIT APPROVAL Formal credit approval policies are implemented by organizations to minimize credit losses. Some companies eliminate credit risk by requiring payment through a credit card. Other companies require that a check accompany the order and generally delay the shipment for the time it takes a check to clear through the banking system to ensure that the payment is collectible.

Most companies that do not deal directly with consumers issue credit to their customers because it is a more convenient way to transact business. However, the company does accept some credit risk that they ultimately will not receive payment from the customer. There can be many reasons for nonpayment ranging from (a) dissatisfaction with, or return of the goods received, or (b) inability to make the payments because of financial constraints. Thus, companies need to have a credit approval process that (a) evaluates the creditworthiness of new customers; and (b) updates the creditworthiness (including timeliness of payments) of existing customers. The credit approval might include a review of sales orders and customer credit information by a computer program that contains current account balance information and credit scoring information to determine whether

credit should be extended to the customer. Most companies set credit limits for customers and develop controls to ensure that a pending sale will not push the customer over the credit limit.

PREPARE SHIPPING AND PACKING DOCUMENTS Many organizations have computerized the distribution process for shipping items from a warehouse. Picking tickets (documents that tell the warehouse personnel the most efficient sequence to pick items for shipment and the location of all items to be shipped) are generated from the sales order or from the customer's purchase order. Separate packing slips are prepared to insert with the shipment and to verify that all items have been shipped. Most companies put a bar code on the shipping container that identifies the contents and delivery location. The bar code can be scanned by the customer to record receipt of the order.

SHIP AND VERIFY SHIPMENT OF GOODS Most goods are shipped to customers via common carriers such as independent trucking lines, railroads, or airfreight companies. The shipper prepares a bill of lading that describes the packages to be conveyed by the common carrier to the customer, the shipping terms, and the delivery address. The **bill of lading** is a formal legal document that conveys responsibility to the shipper. A representative of the common carrier signs the bill of lading acknowledging receipt of the goods.

The shipping department confirms the shipment by (1) completing the packing slip and returning it to the billing department; or (2) electronically recording everything shipped and transmitting the shipping information to the billing department; or (3) preparing independent shipping documents, a copy of which is sent to the billing department. The most common approach for verifying the shipment of goods has been completing the packing slip and sending a copy to the billing department. Companies are increasingly entering shipping information on a computer screen updating both billing and shipping databases.

PREPARE THE INVOICE Invoices are normally prepared when notice is received that goods are shipped. Some companies, however, find it efficient to prepare invoices in advance as long as records show that sufficient levels of inventory are on hand. These companies need to implement control procedures to ensure that the invoices are not processed until there is evidence of shipment. Controls should be in place to ensure that the invoice corresponds with the sales order as to terms of sale, payment terms, and prices for merchandise shipped.

SEND MONTHLY STATEMENTS TO CUSTOMERS Many companies prepare monthly statements of open items and mail these statements to customers. The *monthly statement* provides a detailed list of the customer's activity for the previous month and a statement of all open items. The volume of transactions in many organizations dictates that open account statements be prepared on a cycle basis. For example, if you have a MasterCard or VISA account, you may receive a statement around the 5th of the month with a due date of the 16th of the month; one of your classmates may receive her statement around the 20th of the month with a payment due date around the 29th of the month. If the auditor chooses to confirm the correctness of the accounts receivable by direct correspondence with the customer, information about when and how the client prepares monthly statements will be important.

RECEIVE PAYMENTS Control over cash receipts is often addressed separately as part of the cash receipts and cash management cycle. However, the proper recording of all receipts is crucial to the ultimate valuation of both cash and accounts receivable. Thus, as part of the control structure over accounts receivables, control procedures to ensure the completeness and accuracy of cash receipt recording are important.



For most clients, the processes described will be fully computerized. The auditor should be suspicious of numerous manual journal entries.



BUSINESS RISK AND BUSINESS ENVIRONMENT

Revenue Recognition

LO 2



Improper revenue recognition has been identified as the most frequent factor in financial reporting fraud.

SAS #99, *Consideration of Fraud in a Financial Statement Audit*, states that the auditor should ordinarily presume there is a risk of material misstatement due to fraud relating to revenue recognition. A research study of 300 cases of fraudulent financial statements issued between 1987 and 1997 showed that over half of the frauds involved overstating revenues. Refer to the *Auditing in Practice* feature, and note the wide range of methods used to inflate revenue and net receivables. Note that some of the schemes did not affect net income, but the company was motivated to report higher revenues.

METHODS USED TO INFLATE REVENUE

Recent fraud investigations undertaken by the SEC uncovered a wide variety of methods used to inflate revenue:

- Recognition of revenue on shipments that never occurred
- Hidden “side letters” giving customers an irrevocable right to return the product
- Recording consignment sales as final sales
- Early recognition of sales that occurred after the end of the fiscal period
- Shipment of unfinished product
- Shipment of product before customers wanted or agreed to delivery
- Creation of fictitious invoices
- Shipment to customers that did not place an order
- Shipment of more product than the customer ordered
- Recording shipments to the company’s own warehouse as sales
- Shipping goods that had been returned and recording the reshipment as a sale of new goods before a credit for the returned sale was issued

It is obvious that these frauds could not have taken place had there not been a massive control failure, including management override of controls. Had the auditor understood (a) the risks for such overstatements, (b) the effects on the financial statements, and (c) management’s incentives for misstatement; the auditor could have designed audit procedures to effectively test for the misstatements. For example, if the auditor noted a large increase in sales near the end of the quarter, the auditor could examine a large number of those transactions. Sales invoices that showed a “ship to” address to the company’s own warehouse provides evidence of likely misstatement.

REVENUE RECOGNITION

When to recognize revenue and how much to recognize are often difficult to determine. Auditors should refer to authoritative guidance, such as that provided by the SEC, FASB, and the AICPA to determine the appropriateness of their clients’ method of recognizing revenue.¹ The basic concept for revenue recognition is that revenue should not be recognized until it is realized or realizable and earned.² The SEC staff has determined that the following criteria must be met in applying this concept:

- Persuasive evidence of an arrangement exists.
- Delivery has occurred or services have been rendered.
- The seller’s price to the buyer is fixed or determinable.
- Collectibility is reasonably assured.³

These criteria are not as straightforward as they may seem. For example, the criterion of *delivery* seems simple enough. Consider, however, a situation in which the seller has de-

AUDITING IN PRACTICE

Recent Examples of Improper Revenue Recognition and Receivable Valuation

Coca-Cola is charged with coercing its largest distributors to accept delivery of more syrup than they needed at the end of each quarter, thus inflating sales by about \$10 million a year.

WorldCom's CEO, Bernard Ebbers, pressured the COO to find and record one-time revenue items that were fictitious. The items were hidden from the auditors by altering key documents and denying auditors access to the appropriate database.

HealthSouth understated its Allowance for Doubtful Accounts although it was clear certain receivables would not be collected.

Gateway recorded revenue for each free subscription to AOL services that was given with each computer sale, thus overstating pre-tax income by over \$450 million.

Ahold (a Dutch company that is the world's second biggest operator of grocery stores) booked higher promotional allowances, provided by suppliers to promote their goods, than they received in payment.

Kmart improperly included as revenue a \$42.3 million payment from American Greetings Corporation that was subject to repayment under certain circumstances and therefore should not have been fully booked by Kmart in that quarter.

Xerox improperly accelerated \$6 billion of revenue from long-term leases of office equipment.

Qwest immediately recognized long-term contract revenue, rather than over the 18-month to 2-year period of the contract, inflating revenue by \$144 million in 2000–2001. It also inflated revenue by \$950 million by swapping network capacity with Global Crossing.

Rite-Aid sold 189 stores to J.C. Penney. Instead of booking \$82.5 million as a one-time gain, it put that amount into an internal reserve account and used it to absorb future operating expenses.

Bristol-Myers inflated 2001 revenues by as much as \$1 billion by providing sales incentives to wholesalers who would take delivery of the products without an intent to sell the products until the following year. This practice is known as channel stuffing.

Lucent Technologies improperly booked \$679 million in revenue during its 2000 fiscal year. The bulk of this, \$452 million, reflected products sent to its distribution partners that were never actually sold to end customers (channel stuffing).

Charter Communications, a cable company, added \$17 million to revenue and cash flow in 2000 through a phony ad sales deal with an unnamed set-top decoder maker. They persuaded the set-top maker to tack \$20 onto the invoice price of each box. Charter held the cash and recorded it as an ad sale. Net income was not affected but revenue was increased.

Sources (respectively): *Atlanta Business Chronicle*, June 2, 2003; *The Wall Street Journal Online*, June 9, 2003; *Accountingweb.com*, July 14, 2003; *Accountingweb.com*, May 19, 2003; *The Wall Street Journal Online*, February 25, 2003; *The Wall Street Journal Online*, February 26, 2003; *The Wall Street Journal Online*, June 28, 2002; *St. Cloud Times*, February 26, 2003, p. 6A; *The Wall Street Journal Online*, February 8, 2001; *The Wall Street Journal Online*, July 11, 2002; *The Wall Street Journal Online*, February 9, 2001; *USA Today*, July 25, 2003.

livered product to a customer. The customer has the right to return the product, and the buyer's obligation to pay is contractually excused until the buyer resells the product. In this case, revenue should not be recognized until the buyer has the obligation to pay, that is, when the product is resold.

The SEC generally does not consider delivery to have occurred until the customer has taken title and assumes the risks and rewards of ownership. Auditors may need to do research to determine when a client should recognize revenue and how to audit revenue. Some of the major research sources are:

- *SEC Staff Accounting Bulletin 101* (contained in *Codification of Staff Accounting Bulletins*, Topic 13: Revenue Recognition. It contains several examples of the application of the SEC criteria. Available on the web at <http://www.sec.gov>)
- FASB Concepts Statement No. 5 *Recognition and Measurement in Financial Statements of Business Enterprises*, particularly paragraphs 83 and 84
- AICPA Statements of Position. For example, SOP 97–2 *Software Revenue Recognition*
- Emerging Issues Task Force Abstracts. For example, EITF Issue 99–19 *Reporting Revenue Gross as a Principal versus Net as an Agent*
- AICPA's *Audit Issues in Revenue Recognition* (available on the web at <http://www.aicpa.org>)

- FASB Statements of Financial Accounting Standards. For example, SFAS No. 51 *Financial Reporting by Cable Television Companies*
- AICPA Audit Guide, *Auditing Revenue in Certain Industries*, as of June 1, 2001
- AICPA Industry Accounting and Auditing Guides

Some revenue recognition areas require special consideration. Following is a sample of some that have emerged:

- How much should be recognized as revenue when a company sells another company's product but does not take title until it is sold? For example, should Priceline.com (an Internet travel site) record the full sales price of airline tickets it sells or the net amount it earns on the sale (the sale commission)?
- Should shipment of magazines by a magazine distributor to retail stores result in revenue when delivered to stores or await the sale to the ultimate consumers? Assume that the arrangement with the convenience stores is that all magazines not sold can be returned to the distributor when the racks are filled with the next month's magazines.
- Should revenue be recognized in barter advertising in which two websites exchange advertising space on their websites?
- When should revenue be recognized when:
 - a. The right of return exists?
 - b. The product is being held awaiting the customer's instructions to ship (bill and hold)?
 - c. A bundled product is sold? As an example of the latter item, assume a software company sells software bundled with installation and service for a total of \$5,000. Should the total revenue be \$5,000 or should the service element be separately estimated and recognized along with an attendant liability to perform the service work? What if the software entitles the user to free updates for a period of three years?

PRACTICAL point

Auditors should refer to authoritative sources to determine proper revenue recognition for each client.

Revenue recognition can be complex. The auditor is expected to know enough about the client's transactions to be able to exercise informed judgment in determining both the timing and extent of revenue to be recognized. Although the judgments may appear to be subjective, the SEC and other authoritative bodies have set forth objective criteria they expect both auditors and managers to use in determining revenue recognition. See the *Focus on Fraud* feature.

Fraud Risk Factors—Revenue Recognition

LO 3

There are many management motivations to overstate revenue. Bankruptcy may be imminent, for example, because of operating losses, technology changes, or a general decline in the industry. Executives may be pressured to meet their own or analysts' earnings expectations. The company may need additional financing. Bonuses or stock options may be dependent on reaching a certain earnings goal. A merger may be pending and management wants to negotiate the highest price possible.

There are a number of "red flags" to which the auditor should be alert when evaluating the potential for fraud in the revenue cycle. First, the auditor examines the external pressures that might lead the organization to commit financial reporting fraud. Second, the auditor examines the financial statements on an analytical basis to determine if account balances are out of line in relationship to the economy and whether the results differ from expectations. Third, the auditor needs to realize that not all of the fraud will be instigated by management. For example, a CFO or accounting staff person may be engaged in misappropriating assets for their own use (defalcation).

FOCUS ON FRAUD

Channel Stuffing

The timing of recording a sale is crucial. The Securities & Exchange Commission has been proactive in setting criteria for sales recognition. These include: the earnings principle is met, revenue is realized, and the principle revenue producing activities are met. The SEC investigated Lucent Technologies because Lucent was involved in "channel stuffing." Lucent would ship products during the last few days of a quarter in order to make pre-set revenue objectives. The customers would take title to the goods (but not always deliv-

ery) because (a) they eventually needed the goods; and (b) Lucent provided large incentives (good deals) to take the goods in advance. The SEC said the company was essentially taking normal sales from the next quarter (year) to show sales in the current quarter (year). The SEC argued that the earnings principle was not met and sales should not be recognized. Auditors will need to make judgments on whether unusual amounts of end-of-quarter sales should be recognized as normal revenue.

EXTERNAL FRAUD INDICATORS

There are a number of factors to which the auditor should be alert when evaluating the potential fraud risk for a company. These factors include, but are not limited to, an evaluation of the following:

- Management compensation schemes. Auditors should be especially wary of those that rely on stock options and stock prices.
- Expiration of stock options. If stock options are expiring, there may be a tendency to attempt to boost stock price before the options expire.
- Analyst expectations. The auditor needs to be aware of representations made by management to analysts and the potential effect of those expectations on stock prices.
- Industry trends. If the company's performance is significantly different than the rest of the industry or the economy, the auditor should be suspicious.
- The company engages in many complex sales arrangements.
- Government regulators such as the SEC are conducting investigations of the client's accounting.
- The company has a history of "aggressive accounting interpretations."
- The company grows through acquisitions made with stock.

INTERNAL RED FLAGS

The auditor should also be alert to internal red flags that might affect the revenue accounts. Some factors that should be considered include:

- Accounting is made unduly complex (see the *Focus on Fraud* feature).
- Accounting is not centralized.
- Accounting personnel are not qualified for their positions.
- The CFO does not have an accounting background.
- Internal audit is weak or does not address accounting controls.
- Computerized controls are weak or difficult to understand.

UNUSUAL FINANCIAL RESULTS

If a fraud is taking place, the financial statements usually will contain departures from industry norms. Some of the differences the auditor might expect to see include:

- Revenue increases in the face of strong competition and competitor's new products
- Revenue increases that are not consistent with industry expectations or the economy (for example, projections of huge increases in fiber-optic sales when the telecommunications industry was facing a period of intense competition)

PRACTICAL POINT

Most frauds are not unique or novel. Most often, strong indicators of fraud are present and the auditor needs to be alert to these fraud indicators.

FOCUS ON FRAUD

Undue Accounting Complexity

WorldCom is a prime example of undue accounting complexity. Transactions were complex, but they were made more difficult by two factors. First, many of the accounting personnel were not sufficiently qualified for their position. Second, the accounting function was spread over three or more locations without a good rationale for the decentralization. Third, the decentralization was by function. Many firms have decentralization with a full accounting

unit at various locations. WorldCom was not distributed that way. Rather, the property accounting function was located in Texas, while the revenue and line cost accounting was in Mississippi, and the equipment control was in Washington, D.C. Consequently, an accounting unit never saw the complete transaction. Only a few people at the very top were aware of the full accounting entries.

- Higher than average gross margins, or other financial indicators
- Large increases of sales made near the end of the quarter

To address these risks, the auditor needs to perform a detailed analytical review of the transactions and account balances to identify accounts that might be inflated.



ANALYSIS FOR LIKELY MISSTATEMENTS

LO 4

Procedures such as the following can help auditors identify areas of potential misstatements and design appropriate audit procedures.

Compare Client's Revenue Trend with Economic Conditions and Industry Trends

A client showing revenue growth when the economy or industry is in a downturn should cause the auditor to take a careful look at the client's method of recognizing revenue and consider the possibility of improperly inflating revenue.

Compare Cash Flow from Operations with Net Income

If a client is reporting net income but has negative cash flow from operations, the auditor should be very skeptical and look for the possibility that accounts receivable and/or inventory may be inflated.

Perform Analytical Procedures

Basic analytical procedures can identify unexpected results for revenue, the allowance for doubtful accounts, and accounts receivable. Ratio analysis, trend analysis, and reasonableness tests are three standard analytical procedure types that are often used on revenue cycle accounts. Analytical procedures can be effective in signaling potential misstatements or corroborating other evidence on the correctness of a particular account balance. When considering the use of analytical procedures, the auditor should independently examine corroborating evidence rather than rely on management explanations of unexpected findings. Typical analytical procedures for the revenue cycle are described next.

RATIO ANALYSIS

Ratio analysis is a highly effective technique to highlight revenue and asset account balances that are out of line with previous results or auditing expectations. The approach to

ratio analysis is similar to what a financial analyst would perform. Ratios are completed to highlight unusual relations and raise questions that the auditor may want to address. Some ratios focus primarily on revenue accounts, while others focus on receivables and the related allowance account. Remember that if there is a fraudulent credit to revenue, there must be a fraudulent debit somewhere else in the financial statements. That debit is most likely to be in the receivables account, but could be included in some other asset account. Some of the ratios that will facilitate the audit include:

- Gross margin analysis, including a comparison with industry averages and previous year's averages for the client
- Turnover of receivables (ratio of credit sales to average net receivables) or the number of days' sales in accounts receivable
- Average balance per customer
- Receivables as a percentage of current assets
- Aging of receivables
- Allowance for uncollectible accounts as a percent of accounts receivable
- Bad debt expense as a percent of net credit sales

To understand how ratio analysis might be used in evaluating the correctness of sales and receivables, consider the following example taken from a court case. In evaluating the change in the ratios, keep in mind that the company was a wholesaler selling to major retail chains. Thus, it was a very competitive business and this particular wholesaler did not have a particularly sophisticated computer system. The change in ratios noted by the auditor were:

- The number of days' sales in accounts receivable increased in one year from 44.2 to 65.
- The gross margin increased from 16.7 percent to 18.3 percent (industry average was 16.3 percent).
- The amount of accounts receivable increased 35 percent from \$9 million to \$12 million while sales remained virtually unchanged.

All of these ratios were substantially greater than the industry average. An auditor reviewing these ratios should ask these questions: (1) Is there a business reason why these ratios changed? (2) What alternative explanations would describe these changes? (3) What corroborating evidence is available for the potential explanations? *Instead of relying on management for an explanation of the unusual changes, the auditor should develop a potential set of explanations that could account for the change in all the ratios, and gather independent corroborating evidence that either supports or contradicts that explanation.* The auditor should rank order the potential explanations and then investigate to determine which one is the most appropriate. In this example, the company was engaged in a complicated scheme of recording fictitious sales. A number of other explanations were offered by management, for example, increased efficiency, a better computer system, enhanced customer service, and so forth. However, only the fictitious sales could account for the change in the gross margin, the increase in the number of days sales in accounts receivable, and the increase in the total balance of accounts receivable occurring when sales were flat. A judge found that the auditor should have been able to analyze the situation and determine that a fraud had taken place.

The ratio data must be tied to the auditor's detailed understanding of the business. For example, a company sold sport vehicles to dealers that were financed on a floor-plan basis. Under the floor plan, the bank pays the company within four working days of receipt of the cars by dealers. Thus the auditor should be suspicious if accounts receivable were much more than 5–10 days old, and certainly very suspicious if the number of day's sales in receivables exceeded 30 days.



Auditors do not just look at the numbers when performing ratio analysis. The ratios must be examined in relation to the company's business practices and compared to industry ratios. For example, if all sales are due in 30 days, then a larger number, such as 48, of day's sales in receivables would be a concern.



The auditor was suspicious of the unusual amount of receivables. Upon further investigation, he found that the CFO of this company had embezzled several million dollars and had covered it up by recording fictitious accounts receivable. Although 30 days' sales in receivables is common for most companies, it should not have been common for this company. The auditor's knowledge of business procedures uncovered the fraud when even the CEO had not been aware of the problem.

Other ratios that the auditor should consider include:

- Sales in the last month to total sales
- Sales discounts to credit sales
- Returns and allowances as a percentage of sales

TREND ANALYSIS

Trend analysis is based on the assumption that performance will continue in line with previous performance or industry trends unless something unusual is happening in the company. Unless a company has introduced significant new products or new ways of doing things, we would expect a company to parallel industry trends. For example, it might have seemed unusual to some that WorldCom could report continuing increases in earnings, coupled with reduced line costs, when none of its major competitors could do so. Could it be because WorldCom had products the other companies did not have? Did they have superior management? Or should WorldCom have been a company that merited greater audit skepticism and testing?

Some basic trend analysis should include:

- Monthly sales analysis compared with past years and budgets
- Identification of spikes in sales at the end of quarters or the end of the year
- Trends in discounts allowed to customers that exceed both past experience and industry average

The auditor should prepare a graphical illustration of the changes in trends as well as an analysis of the underlying economic data. If an auditor plotted monthly sales and noticed unusual spikes during the last 10 days of June and the last 15 days of December, the trend would stand out and alert the auditor to the need for more investigation of those transactions. The value of the information is enhanced if the analysis is separated by product line, division, or some other subclassification.

PRACTICAL point

The fundamental point that continues to be identified here is that an auditor can achieve excellence only by having a thorough understanding of the client's business, its industry, the economy, and more importantly, the services the client must render to generate and sustain a growing customer base.

consider the RISK

An auditor used regression analysis and noted that the relationship between sales and cost of sales showed the last month of the year as an outlier (nonpredicted relationship). The auditor investigated the unusual finding and found the reason that cost of sales was less than predicted for the month is that the client was recording fictitious sales.

REASONABLENESS TESTS

Reasonableness tests are based on a simple premise: the auditor can gather a great deal of information about the correctness of an account by examining the relationship of the account with some underlying economic factor or event. For example, revenue from room rental for a motel can be estimated using the average room rate and average occupancy rate. Alternatively, the revenue from an electrical utility company should be related to revenue rates approved by a Public Service Commission (where applicable) and demographic information about growth in households and industry in the service area being served.

The auditor can also use more sophisticated analysis for analyzing trends. One of the most powerful tools is regression analysis. Often regression analysis is performed as a *time-series* analysis by examining trends in relationship with previous results. For example, the technique might be used to estimate monthly sales by product line based on the historical relationship of sales and independent variables such as cost of sales, selected selling expenses, or growth in total sales for the industry.

Another form of regression analysis is referred to as *cross-sectional analysis*. Rather than comparing relationships over a period of time, cross-sectional analysis is designed to compare results across a number of locations. For example, Home Depot and Lowes own hundreds of stores—all with one of two or three basic store layouts and size. Cross-sectional analysis allows the auditor to identify any unusual store performances.

The auditor may identify potential problems by comparing sales per square foot of retail space among the stores, looking for those with significantly more sales per square foot than the other stores. More detailed testing should be performed at those stores that have unusual amounts of sales. Regression analysis is covered in Appendix A of this chapter.

ASSESSMENT OF ENVIRONMENT RISK

Risk assessment is an ongoing process in every audit. Recall that the auditor is continually gathering information that updates the auditor’s assessment of client and industry risk, including red flags that may relate to the possibility of fraud. As shown in Exhibit 10.3, the ongoing assessment of business risk is supplemented by analytical procedures and the assessment of environment risk (inherent and control risk) associated with important transaction processing cycles.

LO 5



Most misstatements are more easily identified by considering business risk and the pressure on the company to report increased sales or profits.

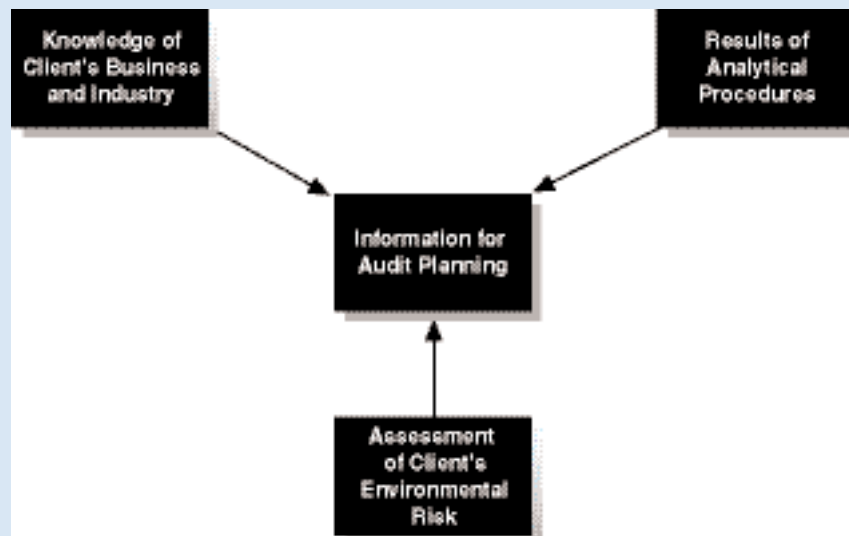
Audit Steps

The audit steps associated with assessing environment risk for the revenue cycle include the following:

1. Continually update information on business risk, including the identification of fraud risk factors noted during preliminary audit planning. Update audit planning for new risk information.
2. Perform analytical procedures to determine if unexpected relationships exist in the accounts, and document how the audit testing should be modified because of the unusual relationships.
3. Develop an understanding of the internal controls in the revenue cycle.
4. Analyze business risk for potential motivations to misstate sales, and determine the most likely method that sales might be misstated.
5. Document the operation of accounting applications in the revenue cycle and the important controls that might lead to a lower assessment of control risk.
6. Develop a preliminary assessment of environment risk based on an understanding of the accounting system and the internal management environment. Decide whether it would be cost beneficial to test the operating effectiveness of controls. (Note: Such testing is now required for audits of public companies.)

EXHIBIT 10.3

Sources of Audit Planning Information



7. If control risk is assessed as high, determine the types of misstatements that are most likely to occur. Consider the potential misstatements in planning substantive tests of account balances.
8. If a lower control risk assessment can be justified by gaining an understanding of the effectiveness of the controls, develop specific audit procedures to test the internal controls.
9. Perform the tests of controls in operation, determine the implications of the results of such tests for the conduct of the remainder of the audit, and document the testing.
10. Determine whether the preliminary control risk assessment should be modified based on the testing results, and document the implications for the remainder of the audit program.

INHERENT RISK—SALES

Sales transactions are routine for most organizations and do not represent an abnormally high risk. The sales at retail organizations such as Wal-Mart or Sears, for example, are routine and are controlled through computerized cash registers and detailed procedures reconciling daily sales recorded by the cash registers with daily deposits at the bank. However, for some organizations, sales may not be routine; or management may override normal processing to achieve a particular sales or profitability goal.

A significant percentage of fraud cases involve improper revenue recognition. Therefore, for most companies, sales transactions are assumed to have high inherent risk.

Revenue should be recognized only when it is realized or is realizable and earned. The auditor has to take care to understand:

- The entity's principal operations, that is, what the entity is in the business of selling. For example, if a business's principal services involve selling phone services, but they enter into a one-time agreement to buy equipment from one supplier and then sell the equipment to another supplier, the auditor should question whether this is the client's business.
- The earning process and the nature of the obligations that extend beyond the normal shipment of goods
- The right of the customer to return a product, as well as the history of the customer in returning merchandise

Complex sales transactions often make it difficult to determine when a sale has actually taken place. For example, a transaction might be structured so that title passes only when some contingent situations are met, or the customer may have an extended period to return the goods. The FASB has addressed several of these complex issues. Some difficult audit issues include determining:

- The point in time when revenue should be recognized
- The impact of unusual terms, and whether title has passed to the customer
- That all goods recorded as sales have been shipped and were new goods
- The proper treatment of sales transactions made with recourse or that have an abnormal or unpredictable amount of returns

The auditor can identify many of these risks when developing an understanding of business risks and control environment of the client and the types of transactions entered into by the client.

SALES WITH ABNORMAL RETURNS Companies that suddenly show an abnormal amount of merchandise returns most likely have problems that should lead the auditor to further evaluate the controls over sales. One example of such a problem was MiniScribe,



Organizations still commit fraud by manipulating shipping dates.

a manufacturer of disk drives for personal computers. The company had a very aggressive, sales-oriented chairman who communicated specific sales goals to the financial press. The goals were set assuming that MiniScribe could continue to grow at a rate that had been obtained in the past, even when the company had lost a major customer and computer sales were declining. Poor quality control led to a high rate of returns by customers. Rather than reworking the returns, MiniScribe shipped the returned disk drives as new products. When the auditors discovered the situation, the company had to write down assets of more than \$200 million.

Examples of sales transactions that have high inherent risk and have caused the SEC to issue additional guidance are reported in Exhibit 10.4.

EXHIBIT 10.4

Examples of Complex Sales Transactions

DELIVERY

Company A receives purchase orders for products it manufactures. At the end of its fiscal quarters, customers may not yet be ready to take delivery of the products for various reasons. These reasons may include, but are not limited to, a lack of available space for inventory, having more than sufficient inventory in their distribution channel, or delays in customers' production schedules.

Question

May Company A recognize revenue for the sale of its products once it has completed manufacturing for specific companies if it segregates the inventory of the products in its own warehouse from its own products? What if it ships the products to a third-party warehouse but (1) Company A retains title to the product, and (2) payment by the customer is dependent upon ultimate delivery to a customer-specified site?

Answer

Generally, no. The SEC's staff believes that delivery generally is not considered to have occurred unless the customer has taken title and assumed the risks and rewards of ownership. Typically this occurs when a product is delivered to the customer's delivery site (if the terms of the sale are FOB destination) or when a product is shipped to the customer (if the terms are FOB shipping point).

INTERNET SALES

Company B operates an Internet site from which it will sell Company C's products. Customers place their orders for the product by making a product selection directly from the Internet site and providing a credit card number for the payment. Company B receives the order and authorization from the credit card company, and passes the order on to Company C. Company C ships the product directly to the customer. Company B does not take title to the product and has no risk of loss or other responsibility for the product. Company C is responsible for all product returns, defects, and disputed credit card charges. The product is typically sold for \$200 of which Company B receives \$30. In the event a credit card transaction is rejected, Company B loses its margin on the sale (the \$30).

Question

Should Company B recognize revenue of \$200 or \$30?

Answer

The SEC's position is that Company B should recognize only \$30. "In assessing whether revenue should be reported gross with separate display of cost of sales to arrive at gross profit or on a net basis, the staff considers whether the registrant:

1. Acts as principal in the transaction,
2. Takes title to the products,
3. Has risks and rewards of ownership, and
4. Acts as an agent or broker (including performing services, in substance, as an agent or broker) with compensation on a commission or fee basis."

INHERENT RISKS: RECEIVABLES

The primary risk associated with receivables is that the net amount shown is not collectible, either because the receivables recorded do not represent bona fide claims or there is an insufficient allowance for uncollectible accounts. If a valid sales transaction does not exist, a valid receivable does not exist. Alternatively, if the company had been shipping poor quality goods, there is a high risk of return. Finally, some companies may have chosen to sell to new customers that have questionable credit paying ability.

There are other risks that may be directly related to the nature of the sales contract that was written with the customer, or with the company's responsibility for the receivables. For example, a company may desperately need cash and decide to sell the receivables to a bank, but the bank may have a right to seek assets from the company if the receivables are not collected. Some of the risks affecting receivables include:

- Sales of receivables made with recourse but recorded as sales of the receivables rather than as financing transactions
- Receivables pledged as collateral against specific loans. Disclosures of such restrictions are required.
- Receivables incorrectly classified as current when the likelihood of collection during the next year is low
- Collection of receivables contingent on specific events that cannot currently be estimated
- Payment is not required until the purchaser sells the product to its end customers.

The Control Environment and Sales

The organization's control environment affects revenue and related transactions more than most accounts. The auditor must consider:

- The integrity of management
- The financial condition of the organization
- The financial pressures facing the organization
- Management incentives to achieve various financial goals



Most frauds are covered up by inflating either accounts receivable or inventory.

Some companies create high expectations and may not pay much attention to how the goals are achieved, but rather whether they are achieved. Similarly, representations to the financial press by management or stock analysts regarding performance expectations create incentives to meet those expectations, because failure to do so can cause the company's stock price to drop.

Developing an Understanding of Internal Controls

Once the auditor has obtained an understanding of the control environment, attention is shifted to the remaining components of internal control—risk assessment, control activities, information and communication, and monitoring controls. Although the auditor needs to understand all the components of internal controls, the auditor will normally find it useful to focus attention on significant control procedures and monitoring controls. Remember, the auditor is required to gain an overall understanding of internal controls. The auditor will normally gain an understanding of the controls with a walk-through of the processing, inquiry, observation, and review of the client's systems documentation. That understanding must be documented.

OCCURRENCE

Sales transactions should be recorded only when title has passed and the company has received cash or a collectible receivable. Control procedures should ensure that a sale is

recorded only when shipment has occurred and the primary revenue producing activity has been performed. Most companies prepare monthly statements to customers. A strong control occurs when the statements are prepared and mailed independently of the department initially processing the transaction. Customer inquiries about their balances should be channeled to a department or function that is independent of the original recording of the transactions. The separation provides for operational efficiency and an effective system of checks and controls to guard against fictitious transactions.

Unusual transactions, either because of their size, complexity, or special terms, should require a high level of management review. Each organization will determine the appropriate level for unusual transactions. However, it is clear that upper levels of management—and maybe even the board—must be involved in approving highly complex and large transactions.

For normal transactions, authorization should be captured as part of an audit trail and should not be performed by the same person who records the transactions. Credit authorization is often computerized and includes an update of a customer's outside credit rating and a status of the current amounts owed to the client. The credit policies should fit the organization. For example, clients that sell large special-order products should develop credit policies requiring (1) information on past customer payments, (2) current credit rating information from companies such as Dun & Bradstreet, and in some cases, (3) a customer's audited annual financial statements and/or current interim financial information.

CUTOFF

Most transactions should be routine and the accompanying controls should ensure that the transactions are properly recorded at the time they take place. Each transaction should be uniquely identified and accounted for. A formal process should be in place to record the sale upon notification of shipment.

COMPLETENESS

Completeness control procedures ensure that all valid transactions are recorded. Although companies are not usually motivated to understate sales, many transactions across businesses remain unrecorded because of (a) sloppy procedures; or (b) friends sell to friends and don't record a transaction. In some cases, companies may omit the full value of transactions because they want to minimize taxable income. Thus, the auditor still has to pay attention to completeness controls. Some controls that should be considered by the auditor include:

- Use of prenumbered shipping documents and sales invoices and subsequent accounting for all documents
- Immediate online entry into the computer system and immediate assignment of unique identification by the computer application
- Reconciliation of shipping records with billing records
- Supervisory review, for example, the review of transactions at a fast-food franchise
- Reconciliation of inventory with sales; for example, the reconciliation of liquor at a bar at the end of the night with recorded sales.

ACCURACY

Implementing controls to ensure the proper valuation of routine sales transactions should be relatively easy. Sales should be made from authorized computer price lists—for example, the price in a scanner at Wal-Mart, or the price accessed by a salesman from a laptop. The control procedures should ensure the correct input of authorized price changes in the computer files and limit access to those files, including:

- Limiting access to the files to authorized individuals
- Printing a list of changed prices for review by the department authorizing them



Smaller businesses often do not have the personnel to separate the recording, inquiry, and customer statement process. They therefore have greater risks related to embezzlement of funds.



Sales should be recorded on a normal basis through the client's computer system and the processes described here. Therefore, the auditor should be alert to all sales transactions that are recorded manually through journal entries.

- Reconciling input with printed output reports to ensure that all changes were made and no unauthorized ones were added
- Limiting authorization privileges to those individuals with the responsibility for pricing

Valuation issues most often arise in connection with unusual or uncertain sales terms. Examples include sales where the customer has recourse to the selling company, franchise sales, bundled sales, cost plus contracts, or other contracts covering long periods with provisions for partial payments. If these complex transactions are common, the company should have policies and processes for handling them and these policies should be reviewed by the auditor. Unusual transactions, if material, should be reviewed by the auditor as a part of substantive testing.

Once a transaction has been initiated and captured, it is essential that the accounting system contain adequate control procedures to verify that the integrity of the transaction is maintained: No transactions should be lost, added, or modified during the recording process. Control procedures include periodic reconciliation of input with output, and procedures designed to generate prompt follow-up of missing or unusual transactions.

CLASSIFICATION

Normally, classification is not difficult for normal, recurring transactions. The major control procedures include (1) a comprehensive chart of accounts for classifying transactions, (2) training of employees, (3) review of complex or unusual transactions by supervisory personnel, and (4) computerization of standard transactions to ensure consistency of classification and processing. The classification of unusual or complex transactions should be reviewed by top management and the auditor with an objective of ensuring that the company and auditor have a thorough understanding of the rights and obligations associated with the transaction and to ensure that it is treated in accordance with the substance of the transaction.

MONITORING CONTROLS

Monitoring controls are designed to alert the organization to a failure in the processing of transactions and then to determine that timely, corrective action is taken. There are a number of monitoring controls applicable to revenue transactions, including:

- Comparison of sales and cost of sales with budgeted amounts
- Exception reports identifying unusual transactions or dollar amounts. Such reports are investigated and corrective action is taken, if needed.
- Reports of transaction volumes that exceed prespecified norms
- Internal audit of the revenue cycle controls and unusual transactions
- Review by division and department management of internal controls and the quality of exception reports for management decision making
- Computer reports reconciling transactions entered into the system with transactions processed by the system
- Monitoring of accounts receivable for quality; for example, aging of accounts receivable by customer credit rating
- Reports of transactions that exceed previously stated edit rules
- Independent follow-up of customer complaints
- Regulatory audits of sales tax collections

Monitoring is one of the five components of the COSO internal control framework. It focuses on effective oversight and follow-up by management. A failure to develop effective monitoring controls or effective follow-up is a significant deficiency in internal control over financial reporting.

PRACTICAL point

Monitoring controls should be carefully designed to signal failures in processes or other controls.

Controls Regarding Returns, Allowances, and Warranties

Abnormal returns or allowances may be the first sign that a company has problems. Thus, it is crucial that an organization develop controls to ensure prompt and timely recording of all returns. As an example, the problems with MiniScribe described earlier were first evidenced by unusually high rates of returns. In many other cases, companies booked large amounts of sales in the fourth quarter only to be followed by large amounts of returns after the end of the year.

Key controls that should be implemented for identifying and promptly recording returned goods include formal procedures for:

- Contractual return and warranty provisions that are clearly spelled out in the sales contract
- Approving acceptance of returns
- Granting credit or performing warranty work related to returned merchandise
- Recording the return of merchandise on prenumbered documents that are accounted for to be sure they are all recorded promptly
- Identifying whether credit should be given, or whether the goods will be reworked according to warranty provisions and returned to the customer
- Valuing items returned for which full credit has been granted
- Determining the potential obsolescence or defects in the goods returned as well as similar goods held in inventory
- Ensuring proper classification of the goods and determining that the goods are not reshipped as if they were new goods

The company needs a specified methodology to determine whether a reasonable value exists at which the returned items could be recorded in regular or scrap inventory. Returned goods might be scrapped, sold through a company factory outlet store, or reworked and sold as repaired products.

Importance of Credit Policies Authorizing Sales

Formal credit policies are designed to ensure the realization of the asset acquired in the sales transaction, that is, the realization of the accounts receivable into cash. Control procedures should ensure that the organization identify the acceptable level of credit risks that should be taken by the organization.

The following control procedures should be considered by an organization in controlling its credit risk at the level desired:

- A formal credit policy, which may be automated for most transactions but requires special approval for large and/or unusual transactions
- A periodic review of the credit policy by key executives
- Continuous monitoring of receivables for evidence of increased risk, such as increases in the number of days past due or an unusually high concentration in a few key customers whose financial prospects are declining
- Adequate segregation of duties in the credit department with specific authorization to write off receivables segregated from individuals who handle cash transactions with the customer

In some industries, such as financial institutions, statutory rules are intended to minimize the financial credit risk to an organization. For example, banks and savings and loans often have limits on how much they can lend to a specific organization. In such cases the auditor must be particularly alert to procedures the client uses to identify all borrowers that are related to each other, so that the aggregate amount of loans does not exceed

PRACTICAL point

The auditor should always examine unusual amounts of sales returns after year-end to determine the cause of the returns.

consider the RISK

Every organization will identify its appetite for risk, including credit risk. Some companies sell primarily to high-risk customers at high rates. Such a strategy is appropriate, but it does mean that the auditor has to closely monitor economic trends that would affect the likelihood that the company's receivables are so risky that the bulk of accounts receivable might be impaired.

**ACL
APPLICATION**

ACL can be used to list all accounts that exceed statutory regulations, or it can group accounts from related organizations to identify an excess concentration of risks.

statutory regulations. Financial institutions normally have specific procedures to collateralize major loans. Unfortunately, reviews by outside agencies have indicated that many financial institutions have not done a good job of developing control procedures to ensure that loans remain fully collateralized, that the collateral's value is greater than that of the loan, and that the lender has the first claim on the collateral.

Documenting, Testing, and Assessing Environment Risk

DOCUMENTING CONTROLS

LO 6

Internal controls can be documented in a flowchart, narrative, and/or questionnaire. An example of an internal control questionnaire for sales and accounts receivable is shown in Exhibit 10.5. Each negative answer in the questionnaire represents a potential control procedure deficiency. When a negative answer is given, the auditor should consider the impact of the response on potential misstatements in the account. For example, a negative response to the question regarding the existence of a segregation of duties between those receiving cash and those authorizing write-offs or adjustments of accounts indicates that a risk exists that an individual could take cash receipts and cover up the theft by writing off a customer's balance. Unless another control compensates for this weakness, the auditor should consider the risk of that specific misstatement in designing the audit program for direct tests of the account balance.

When the understanding and documentation of the accounting system and control procedures are completed, the auditor develops a preliminary assessment of control risk present in the account(s). If the auditor determines that the assessment of control risk would be reduced to some reasonably low level if the controls were functioning as described, the auditor determines whether overall testing to see that significant controls are operating as described can reduce audit costs.

TESTING FOR OPERATING EFFECTIVENESS

If the auditor is relying on controls, there must be a determination that not only have the controls been placed in operation, but also they are working effectively. As an example, if the auditor chooses to rely on controls related to the authorization of sales price, the auditor has to design tests that will substantiate that the controls are effective to ensure that (1) all invoice prices come from the authorized price list, and (2) only authorized price changes are made to the master price file. In most organizations, the auditor can choose from a wide variety of procedures to test the controls. Alternatives include:

- *Manual testing*—Take a sample of recorded transactions and determine that the prices agree with authorized prices.
- *Computerized testing of computer controls*—Test controls used to limit access to the computer files, select a number of prices in the system, and reconcile to preauthorized price changes.
- *Testing of monitoring controls*—Management should have controls in place to assist them in monitoring proper prices. For example, management may have set targets for gross profit by product line and receive weekly reports on actual results. Management may then investigate any reports that deviate from expected results to determine if the deviation is due to cost problems or mispricing of the sales. The auditor can review these reports, determine if there were deviations, and determine what actions management took after investigating the problem.

PRACTICAL point

The auditor must test the controls if attesting to management's report on internal controls over financial reporting. The selection of controls to test and the audit procedures are the same as described here for testing the effectiveness of controls in operation.

The auditor must decide which approach or combination of approaches provides the best evidence at the least cost. Many auditors take a sample of transactions to determine that they had been recorded at authorized prices. However, such a procedure is only an indirect test of the control. The auditor will also have to determine that the price used on the invoice had been properly authorized.

SALES ORDERS

Sales authorized by: (Describe the source and scope of authority, and the documentation or other means of indicating authorizations. Include explicitly the authorization of prices for customers.)

Sales orders prepared by, or entered into the system by:

Individuals authorized to change price tables: (Indicate specific individuals and their authority to change prices on the system and the methods used to verify the correctness of changes.)

Existence of major contracts with customers that might merit special attention during the course of the audit: (Describe any major contracts and their terms.)

Restrictions on access to computer files for entering or changing orders: (Describe access control systems and indicate whether we have tested them in conjunction with our review of data processing general controls.)

	Check (x) one:	
	Yes	No
1. Are orders entered by individuals who do not have access to the goods being shipped?	_____	_____
2. Are orders authorized by individuals who do not have access to the goods being shipped?	_____	_____
3. Are batch and edit controls used effectively on this application? If so, describe the controls.	_____	_____

4. Are sales invoices prenumbered? Is the sequence of prenumbered documents independently accounted for?	_____	_____
5. Are control totals and reconciliations used effectively to ensure that all items are recorded and that subsidiary files are updated at the same time invoices are generated? If so, describe.	_____	_____

6. Do procedures exist to ensure that the current credit status of a customer is checked before an order is shipped? If so, describe.	_____	_____

7. Are price lists stored in the computer independently reconciled to authorized prices by the marketing manager or someone in the marketing manager's office?	_____	_____

Exhibit 10.6 presents an overview of various controls to satisfy the specific control objectives, how the controls might be tested, and the audit implication if controls are not working. Note that the tests of controls include selecting samples of transactions to vouch

EXHIBIT 10.6

Control Examples and Tests

Objective	Examples of Controls	How Control Would be Tested	Implications if Control Is Not Working
1. Recorded transactions occurred.	a. Sales recorded only with valid customer order and shipping document.	a. Sample recorded sales transactions and vouch back to source documents. Use generalized audit software to match sales with electronic shipping document or customer order.	a. Shift testing to an emphasis on balance sheet testing. Extend substantive testing over accounts receivable and cash.
	b. Sales at cash register are accompanied by receipt given to customer. Receipt is required to return merchandise.	b. Test to see that total sales are reconciled with daily receipts deposited with bank.	b. Same as above.
2. Sales are recorded in the correct accounting period (cutoff).	a. Computer records sale upon entry of customer order and shipping information. Transactions entered, but not yet processed, are identified for an exception report and followed up.	a. Review monitoring controls (e.g., management's review of transactions entered into the system and not shipped and billed).	a. Company may have unrecorded sales transactions. Discuss with management to determine if they have plans to bill the sales.
	b. Monthly statements are sent to customers. A group independent of those recording the transactions receives and follows up complaints.	b. Review nature of complaints received. Investigate to determine if there is a pattern.	b. Sales may be recorded in the wrong year. Expand sales cutoff testing.
3. All sales are recorded (completeness).	a. Prenumbered shipping documents and invoices are periodically accounted for.	a. Review reconciliations to determine that the control is working.	a. b. & c. Expand cutoff tests at year-end to determine that all transactions are recorded in the correct period.
	b. Online input of transactions and independent logging of transactions	b. Use online computer techniques such as ITF to verify transaction trails.	
	c. Monitoring: Transactions are reviewed, compared with budgets, and differences investigated.	c. Review management reports and evidence of actions taken.	
4. Sales are accurately recorded.	a. Sales price comes from authorized sales price list maintained on the computer.	a. Test access controls. Take a sample of recorded sales invoices and trace price back to authorized list.	a. Accounts receivable may be over- or understated due to pricing errors. Expand confirmation and subsequent collection procedures.

EXHIBIT 10.6		Control Examples and Tests (continued)	
Objective	Examples of Controls	How Control Would be Tested	Implications if Control Is Not Working
5. Sales are correctly classified.	a. Chart of accounts is up-to-date and used.	a. Take a sample of transactions and trace to general ledger to see if properly classified.	a. Expand test of sales and receivables to determine that all items represent bona fide contracts and are not consignment sales or sales of operating assets.
	b. Computer program is tested before implementation.	b. When testing general controls, determine that controls over program changes are working.	b. Expand confirmations to customers.

back to supporting documents, reviewing monitoring controls, testing computer access controls, using audit software to match documents and look for gaps or duplicate document numbers, reviewing customer complaints, reviewing documents such as reconciliations and management reports noting timely action taken, and reviewing sales contracts.

REASSESSMENT OF CONTROL RISK

In most cases, controls are operating effectively and the auditor’s tests provide support for the reduced level of control risk. In some cases, however, controls are not operating effectively and misstatements may exist in the general ledger. Given the nature of the potential misstatements, the auditor needs to adjust the audit program to specifically recognize the types of misstatements that may have occurred and develop audit procedures to determine the extent of such misstatements.

LINKING ENVIRONMENT RISK ASSESSMENT AND SUBSTANTIVE TESTING

Recall that even though audit risk is predetermined by the auditor, the type of audit evidence that must be gathered and assessed is a function of environment risk and detection risk. If environment risk is assessed low, the auditor can plan less extensive substantive testing or can be more flexible when the procedures are applied.

The auditor learns three things during the assessment of environment risk that directly affect the design of substantive audit procedures:

1. The nature of the accounting system, the controls used, and the validity of documents generated in the client’s processing
2. The existence of fraud risk factors
3. The effectiveness of controls in preventing or detecting errors and fraud and, if not effective, the types of misstatements that are likely to occur.

LO 7



Weaknesses in internal control raise the risk of misstatements. The audit must be adjusted to test for the possibility of misstatements.

Substantive Testing in the Revenue Cycle

PLANNING FOR DIRECT TESTS OF TRANSACTIONS AND ACCOUNT BALANCES

Audit objectives provide the framework for the development of audit programs in the revenue cycle. Audit programs are based on assertions. Audit evidence addresses the assertions in the context of the general planning factors discussed in Chapter 7 on audit evidence for testing account balances.

LO 8

AUDIT OBJECTIVES AND ASSERTIONS

The audit objectives, related assertions, and typical audit tests for sales and accounts receivable are shown in Exhibit 10.7. The audit objectives are directly derived from the assertions framework. The audit procedures show an integration of tests of transaction processing, direct tests of the sales and receivables balances, and an integration of evidence derived from related accounts (accounts receivable evidence is applicable to sales assertions, and vice versa). The specific audit procedures to be selected (including the timing and extent of the procedures) depend on evidence the auditor has obtained regarding environment risk.

Accounts Receivable represents the primary balance sheet account in the revenue cycle. Overstatements of sales will cause accounts receivable to be overstated.

Substantive Tests of Revenue

LO 9

The auditor must obtain an understanding of the client's revenue recognition concepts, making sure they are in accordance with generally accepted accounting principles, and are properly applied to revenue transactions. This understanding is acquired from inquiry of management, reviewing company policies and sales contracts, and testing sales transac-

EXHIBIT 10.7

Relationships Between Audit Objectives and Substantive Tests—Accounts Receivable and Sales

Audit Objective (Assertion)	Substantive Test
Recorded sales and accounts receivable are valid (existence/occurrence).	<ol style="list-style-type: none"> 1. Trace sales invoices to customer orders and bills of lading. 2. Confirm balances or unpaid invoices with customers. 3. Examine subsequent collections. 4. Scan sales journal for duplicate entries.
Sales are recorded in the correct accounting period (cutoff).	Perform sales cutoff test.
All sales are recorded (completeness).	<ol style="list-style-type: none"> 1. Trace bills of lading to sales invoice and sales journal. 2. Account for sequence of sales invoices in sales journal. 3. Perform analytical procedures.
Sales and accounts receivable are properly valued (valuation/accuracy).	<ol style="list-style-type: none"> 1. Verify clerical accuracy of sales invoices and agreement of sales invoices with supporting documents. 2. Trace sales invoices to sales journal and customer's ledger. 3. Confirm balances or unpaid invoices with customers. 4. Foot sales journal and Accounts Receivable trial balance and reconcile Accounts Receivable trial balance with control account. 5. Review adequacy of the Allowance for Doubtful Accounts.
Pledged, discounted, assigned, and related-party accounts receivable are properly disclosed (rights, presentation, and disclosure).	<ol style="list-style-type: none"> 1. Obtain confirmations from banks and other financial institutions. 2. Review loan agreements and board of directors' minutes. 3. Inquire of management. 4. Review work performed in other audit areas. 5. Review trial balance of accounts receivable for related parties.
Revenue has been properly recognized in accordance with GAAP (accuracy, valuation, classification).	Review the revenue recognition policies for appropriateness and consistency.

tions. Some research may be needed for unusual or complex sales arrangements, as discussed earlier in this chapter. The assertions related to revenue-related transactions are:

- Occurrence—Have the transactions actually occurred, and do they pertain to the entity?
- Completeness—Have they all been recorded?
- Accuracy—Have they been accurately recorded?
- Valuation—Have the transactions been recorded at proper prices?
- Cutoff—Have they been recorded in the correct accounting period?
- Classification—Have they been recorded in the proper accounts?

The timing and extent of tests depend on the auditor’s assessment of environment risk related to revenue accounts. Audit software can assist in many of the tests.

OCCURRENCE, ACCURACY, AND VALUATION

Vouching a sample of recorded sales transactions back to customer orders and shipping documents provides evidence that the sale occurred. The auditor should compare the quantities billed and shipped with customer orders and verify the clerical accuracy of the sales invoices. The absence of these supporting documents or evidence of tampering with shipping dates should cause the auditor to be skeptical and consider the possibility of fraud.

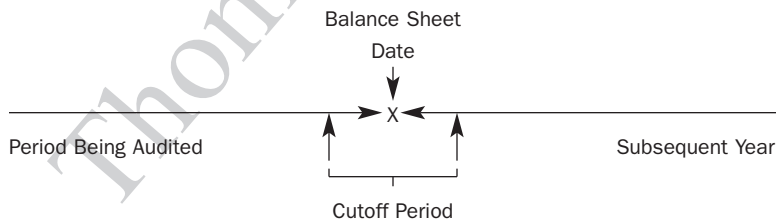
Special care should be given to sales recorded just before the end of each fiscal year to be sure sales has not been inflated by shipping more than the customer ordered. Audit software can be used to identify duplicate recording of sales invoices. Audit software can select the sample and compare with supporting electronic documents. Audit software can also be used to check the clerical accuracy of the invoices and foot the sales journal.

ACL APPLICATION

ACL can perform many of these tests.

CUTOFF

Cutoff tests are procedures applied to sales, sales returns, and cash receipts transactions selected from those recorded during the cutoff period to provide evidence as to whether the transactions have been recorded in the proper period. The **cutoff period** is usually several days before and after the balance sheet date:



The greatest risk of recording transactions in the wrong period occurs during the cutoff period. The extent of cutoff tests depends on the auditor’s assessment of the effectiveness of the client’s cutoff controls. If the client has strong controls to ensure that transactions are recorded in the correct period, the auditor can minimize such testing. However, it should be emphasized that controls can be overridden and that auditors have historically found a high degree of risk related to recording sales transactions in the correct period.

The following items can be examined to determine whether a proper cutoff has been achieved.

Cutoff Test of	Items to Examine
Sales	Shipping documents and related recorded sales
Sales returns	Receiving reports and related credits to customer accounts
Cash receipts	Deposits per books and per bank
	Cash on hand at year-end


**PRACTICAL
point**

Cutoff tests help test the assertion of timeliness in recording transactions.

**ACL
APPLICATION**

ACL can compare billing and shipping dates for recorded transactions and print out all items where the shipment date was later than the invoice date or in a different period.

The auditor should be at the client's location at year-end to record the last shipping record, receiving record, and check mailed for later cutoff testing.

Sales cutoff can be tested in two ways. First, a sample of sales transactions can be selected from the cutoff period to determine the correct time period of recording. The auditor can determine whether the sales were recorded in the correct period by looking at the shipping terms and shipment dates. The auditor may also want to examine the sales contracts to determine the existence of terms that might indicate that the recording of the sale should be postponed. Such terms might include the customer's right of return (and a high probability of return), the existence of additional performance by the seller, the probability of collection based on some future event (contingency), or the existence of an unusually low probability of collection. Second, if reliable shipping dates are stored electronically, generalized audit software can be used to identify sales recorded in the wrong period.

SALES RETURNS CUTOFF The client should document merchandise returned by customers using receiving reports showing the date, description, condition, and quantity of the merchandise. The auditor can select some of the receiving reports issued during the cutoff period and determine whether the credit was recorded in the correct period.

COMPLETENESS

Testing for the completeness of sales and accounts receivable is difficult unless the client has effective internal controls to ensure that all transactions are recorded. Without controls such as use of, and periodic accounting for, prenumbered shipping and billing documents, there is a high probability that some sales transactions could go unrecorded or get recorded twice. If, for example, prenumbered documents are not used, the auditor must consider alternative audit tests, including

- Extensive analytical procedures, such as regression analysis using the historical relationship between sales and cost of sales, or comparing recorded sales with production records for a manufacturer or occupancy rates for a hotel
- Performing detailed cutoff tests with emphasis on transactions recorded in the next fiscal year to determine whether they should have been recorded in the current year

Selecting a sample of shipping documents and tracing them into the sales journal will test completeness. Using audit software, the auditor can look for gaps in the recorded sales invoice numbers and verify that the missing numbers are appropriate and do not represent unrecorded sales. For example, missing numbers may represent voided documents or gaps caused by using different numbers at different locations. In addition, analytical procedures may be used such as comparing monthly sales by product line with prior periods. The results may raise the auditor's suspicion that some sales are missing or that sales have been artificially inflated. These suspicions should be investigated.

Substantive Tests of Accounts Receivable

LO 10

The auditor must determine that receivables exist, belong to the client, are complete, and are properly valued. It is important to realize that existence is necessary for correct valuation, but it does not necessarily ensure correct valuation. For example, a customer might acknowledge the existence of the debt but not have sufficient resources to pay it.

**ACL
APPLICATION**

In addition to selecting items for confirmation, ACL can be used to identify gaps or duplicates in sales invoice numbers.

EXISTENCE AND OCCURRENCE

The timing and nature of audit tests depend directly on the auditor's assessment of environment risk for this assertion. The most widely used auditing procedure is to ask customers to confirm the existence and amount of their indebtedness to the client. Confirmation of receivables is required by GAAS under most circumstances.

VALUATION

Two valuation questions directly concern the auditor. First, are the sales and receivables transactions initially recorded at their correct value (gross value)? Second, is it likely that the client will collect the outstanding receivables in a timely fashion (net realizable value)? The first concern is addressed during the auditor's tests of transactions processing and reviews of contracts. The second concern is more difficult and is addressed when determining the reasonableness of the allowance for doubtful accounts.

RIGHTS AND OBLIGATIONS

Some companies sell their receivables to banks or other financial institutions, but may retain responsibility for collecting the receivables or may be liable if the percentage of collection falls below a specified minimum. The auditor should review all such arrangements and consider obtaining confirmations from the client's banks about any contingent liabilities, including discounted receivables. The auditor should also make inquiries and review the minutes of the board of directors' meetings for indications of discounted receivables.

PRESENTATION AND DISCLOSURE

Material amounts of pledged, discounted, or assigned receivables or related-party receivables and sales should be disclosed in the financial statements. Substantive procedures that provide evidence about the need for such disclosures include confirmations from banks and financial institutions; review of loan agreements, board of directors' minutes, and the receivables trial balance; and inquiry of management.

Standard Accounts Receivable Audit Procedures

Although each audit is unique, the auditor most likely performs some standardized audit procedures such as obtaining and evaluating an aging of accounts receivable, confirming receivables with customers, performing cutoff tests, and reviewing subsequent collections of receivables.

AGING ACCOUNTS RECEIVABLE

The auditor usually obtains a copy of a detailed aged accounts receivable trial balance from the client, manually prepares a trial balance, or uses generalized audit software to assist in developing aging information and identifying old outstanding balances. (See Exhibit 10.8 for an example of an aged trial balance.) A detailed trial balance lists each customer's balance or unpaid invoice with columns to show those that are current, 30 days overdue, 60 days, and so on. Generalized audit software can also be used to develop an aging summary.

If the client prepared the trial balance, it should be tested for mathematical and aging accuracy to be sure that it is a complete representation of the recorded accounts receivable balance that will appear on the balance sheet. It should be footed and checked for agreement with the general ledger, and the aging should be tested to be sure that the client's personnel or computer program that prepared the information did it correctly. Many companies have serious algorithm difficulties in applying partial payments, or in applying round payment amounts to account balances when specific invoices are not noted in the customer's remittance.

The aged trial balance can be used to:

- Match the detail to the balance in the control account
- Select customer balances for confirmation
- Identify amounts due from officers, employees, or other related parties or any non-trade receivables that need to be separately disclosed in the financial statements (presentation and disclosure)

ACL APPLICATION

ACL is frequently used to age and analyze accounts receivables files.

EXHIBIT 10.8		Accounts Receivable Aging				
Name	Balance	Current	30–60	61–90	91–120	Over 120
Alvies	154,931	154,931				
Basch	71,812		71,812			
Carlson	115,539	115,539				
Draper	106,682	106,682				
Ernst	60,003			60,003		
Faust	90,907	90,907				
Gerber	241,129	211,643	29,486			
Hal	51,516	51,516				
Harv	237,881	237,881				
Kaas	18,504				18,504	
Kruze	44,765	44,765				
Lere	28,937	28,937				
Misty	210,334	210,334				
Mooney	216,961	216,961				
Otto	273,913	273,913				
Paggen	209,638	209,638				
Quast	88,038					88,038
Rauch	279,937	279,937				
Sundby	97,898	97,898				
Towler	96,408	85,908		10,500		
Zook	31,886	31,886				
.	.	.				
.	.	.				
Nough	<u>245,927</u>	<u>245,927</u>				
Totals	<u>2,973,546</u>	<u>2,695,203</u>	<u>101,298</u>	<u>70,503</u>	<u>18,504</u>	<u>88,038</u>

- Help determine the reasonableness of the allowance for doubtful accounts by identifying past-due balances

Credit balances can also be identified and, if significant, reclassified as a liability. In addition, the auditor should note collections of balances subsequent to year-end on the trial balance.

CONFIRMING RECEIVABLES WITH CUSTOMERS

Confirmation of receivables can provide reliable external evidence on the existence of recorded accounts receivable and should be considered as an audit procedure on every engagement.

WHY CONFIRMATIONS ARE REQUIRED The requirement for confirming receivables relates to a 1938 landmark case, *McKesson and Robbins*, in which the SEC found a massive fraud involving material amounts of fictitious receivables. The misstatements would have been discovered had the auditors confirmed the receivables. Current standards require the use of confirmations unless one of the following conditions exists:

- Accounts receivable are *not material*.
- The use of confirmations would be *ineffective*. An auditor might determine that confirmations are ineffective if customers have previously refused to confirm their bal-

ances and there is no reason to believe that they will do so this year. Or the auditor has reason to believe that the customers might not have a good basis on which to respond to the confirmation.

- The auditor's assessment of environment risk is low, and that assessment, in conjunction with the evidence provided by other substantive tests, is *sufficient* to reduce audit risk to an acceptably low level.

Information requested in confirmation letters must be *objective and independently verifiable* by the customers from their own records. Recipients may be more likely to reply and identify discrepancies if the confirmation request is sent with their monthly statement, or if a list of outstanding invoices and unapplied credits is attached. It is also a good idea to set a response deadline. When the verification of an account balance is difficult or complex, the auditor may ask the recipient to confirm supporting information from which the auditor can later compute the ending account balance. For example, instead of asking an individual to confirm an installment loan balance that includes a complex interest calculation, the auditor could request confirmation of the date of the loan, original balance, interest rate, number of installments, and date the last installment was paid. Otherwise, the recipient may call the bank and ask what their balance is—not an independent source of evidence!

TYPES OF CONFIRMATIONS The two basic types of accounts receivable confirmations are positive confirmations and negative confirmations. **Positive confirmations** are letters sent to selected customers asking them to review the current balance or unpaid invoice(s) due the client and return the letters directly to the auditor indicating whether they agree with the indicated balance. If the customer does not return a signed confirmation, the auditor needs to use follow-up audit procedures to verify the existence of the customer's balance. An example of a positive confirmation is shown in Exhibit 10.9. Notice that it is printed on the client's letterhead, is addressed to the customer, is signed by the client, indicates the balance or unpaid invoice amount as of a particular date—referred to as the confirmation date—and asks the customer to respond directly to the auditor in an enclosed self-addressed, postage-paid envelope.

A **negative confirmation** is similar in that it asks the customer to review the client's balance but requests the customer to respond directly to the auditor only if the customer disagrees with the indicated balance. Exhibit 10.10 is an example of a negative confirmation. A negative confirmation is less expensive to administer than a positive confirmation because there are no follow-up procedures when a customer does not return the confirmation. The auditor assumes that a nonresponse has occurred because the customer agrees with the stated balance.

In order to adequately respond to a confirmation request, customers must reconcile any differences between their records and the client's records (such as payments already mailed or invoices not yet received). Sometimes this may involve considerable effort on the customers' part and many of them do not take the time to respond.

USE OF CONFIRMATIONS Positive confirmations are considered to be more persuasive than negative confirmations because they result in either (1) the receipt of a response from the customer, or (2) the use of alternative procedures. The negative form may be used *only* if all three of the following conditions exist:

- There are a large number of relatively small customer balances.
- The assessed level of environment risk for receivables and related revenue transactions is low.
- The auditor has reason to believe that the customers are likely to give proper attention to the requests; that is, the customers have independent records on which to make an evaluation, will take the time to do so, and will return the confirmation to the auditor if there are significant discrepancies.

EXHIBIT 10.9

Positive Confirmation

NSG Manufacturing Company

200 Pine Way, Kirkville, WI 53800

January 10, 2007

A.J. Draper Co.
215 Kilian Avenue
Justice, WI 53622

Our auditors, Rittenberg & Schwieger, CPAs, are making an annual audit of our financial statements. Please confirm the balance due our company as of December 31, 2006, which is shown on our records as \$32,012.38.

Please indicate in the space provided below if the amount is in agreement with your records. If there are differences, please provide any information that will assist our auditors in reconciling the difference.

Please mail your reply directly to Rittenberg & Schwieger, CPAs, 5823 Monticello Business Park, Madison, WI 53711, in the enclosed return envelope. PLEASE DO NOT MAIL PAYMENTS ON THIS BALANCE TO OUR AUDITORS.

Very truly yours,

Joleen Soyka

Joleen Soyka
Controller
NSG Manufacturing Company
To: Rittenberg & Schwieger, CPAs

The balance due NSG Manufacturing Company of \$32,012.38 as of 12/31/06 is correct with the following exceptions, (if any):

Signature: _____

Title: _____

Date: _____


**PRACTICAL
point**

Because negative confirmations do not provide assurance on each account that is selected, they cannot be used with statistical sampling evaluation techniques.

If the negative form is used, the number of requests sent or the extent of other procedures applied to the accounts receivable balance should normally be increased to obtain the same degree of assurance as would have been obtained using the positive form. Therefore, the auditor has a cost-benefit decision to make in choosing between the two forms. More time per confirmation letter is spent on the positive form; but because it is more reliable, fewer forms need to be sent and/or the extent of other procedures can be reduced. Auditors sometimes choose to use positive confirmations for large receivable balances and negative confirmations for the smaller balances.

Auditors should normally confirm the terms of unusual or complex agreements or transactions in conjunction with the confirmation of account balances or separately. The confirmation may need to be addressed to customer personnel who would be familiar with the details rather than to their accounts payable personnel. In certain circumstances, the auditor should confirm not only the terms of the transactions but also the absence of

EXHIBIT 10.10

Negative Confirmation

NSG Manufacturing Company

200 Pine Way, Kirkville, WI 53800

January 10, 2007

B. D. Kruze
8163 Pleasant Way
Lucas, TX 77677

Our auditors are making an annual audit of our financial statements. Our records show an amount of \$1,255.78 due from you as of 12/31/06. If the amount is not correct, please report any differences directly to our auditors, Rittenberg & Schwieger, CPAs, using the space below and the enclosed return envelope. NO REPLY IS NECESSARY IF THIS AMOUNT AGREES WITH YOUR RECORDS. PLEASE DO NOT MAIL PAYMENTS ON ACCOUNT TO OUR AUDITORS.

Very truly yours,



Joleen Soyka
Controller
NSG Manufacturing Company

Differences Noted (If Any)

The balance due NSG Manufacturing Company of \$1,255.78 at 12/31/06 does not agree with our records because (No reply is necessary if your records agree):

Signature: _____

Title: _____

Date: _____

side agreements. Examples of these circumstances include bill-and-hold transactions, extended payment terms or nonstandard installment receivables, or an unusual volume of sales to distributors/retailers (possible “channel stuffing”).

CONFIRMATIONS AS AUDIT EVIDENCE Confirmations may provide evidence on a number of assertions in the revenue cycle. However, the persuasiveness of some forms of confirmations is open to question, and the auditor must be aware of potential impairments that jeopardize the integrity of confirmation responses. (See the *Auditing in Practice* feature.) Confirmations are generally considered to provide *strong* evidence about the *existence* of receivables and the *completeness* of collections, sales discounts, and sales returns and allowances. For example, if a payment had been made, or an invoice was recorded but no shipment occurred, the customer would likely report the discrepancy on the confirmation. A confirmation can be a very effective procedure to address the existence of fictitious sales. The presumption is that if the fictitious sales are recorded to the account of

AUDITING IN PRACTICE

Reliability of Confirmation Responses

Several research studies have shown that confirmations are not as reliable as auditors would like to believe. In one study, installment loan customers of a large bank were sent confirmations with balances that were known to be incorrect. Negative confirmations were sent to some customers and positive confirmations to others. In each case, there were equal numbers of small and large understatements and overstatements.

If negative confirmations were a reliable source of evidence, the auditor could expect a response from most of the customers objecting to the balance. On average, however, fewer than 20 percent of the customers with known errors actually responded to the request to indicate differences to the auditor. The auditor ordinarily assumes that the other 80 percent represents correct balances—an erroneous conclusion. Less than 50 percent of those replying to the positive confirmations responded to the auditor indicating that the balance as shown by the bank was incorrect.

The majority returned signed statements agreeing with balances that the auditor knew to be incorrect!

Why were the responses so unreliable? Several explanations are possible. First, the borrowers may have compared the confirmation with their records, detected a discrepancy, and declined to inform the auditor because:

- The misstatement was in the borrower's favor, so correcting the bank's books would not be advantageous; borrowers were less likely to respond when their balances were understated.
- The misstatement was perceived as small and not worth informing the auditor about.
- The borrowers concluded that their own records were wrong.

The positive confirmation results were also disturbing.

Borrowers may fail to compare the confirmation with their records or assume that the balance is correct. In some instances, customers admitted to simply signing and returning the confirmation request to avoid being bothered by further requests.

Source: Horton, Lee Sorkin, *The Expanded Field Confirmation*, Research Report No. 21, copyright 1978. The Institute of Internal Auditors, Research Foundation, 247 Maitland Avenue, Altamonte Springs, Florida 32701-4201 U.S.A. Reprinted with permission.

a *valid* customer, the customer will note that some of the recorded sales are not correct. If the customer is fictitious, the auditor must take care to ensure that the letter will not be delivered to a location where the client can act as a surrogate and confirm an inappropriate receivable.

ACCURACY AND SECURITY OF CONFIRMATION PROCESS Confirmations may be prepared manually but are more frequently prepared using audit software. The auditor should ensure that the information in each letter is correct and should control the mailing of the confirmation requests so that the client cannot modify them or send them to a different address. Customers are requested to return the confirmations directly to the auditor's office in an enclosed self-addressed, postage-paid envelope. Similarly, the mailing should show the auditor's address as the return address in the event that the confirmation is not deliverable. Undeliverable confirmations should raise the auditor's suspicion regarding the validity of the recorded receivable.

SAMPLE SELECTION There are several approaches to selecting receivables to be confirmed. The auditor can confirm all of the large balances and randomly or haphazardly select some of the smaller balances. Either nonstatistical or probability proportional to size (PPS) sampling (described in Chapter 9) can be used.

ACL APPLICATION

ACL can be used to profile the account and select items for verification using either statistical or nonstatistical sampling.

SAMPLING UNIT The auditor has a choice in identifying the sampling unit by confirming a customer's entire balance or selecting one or more of the unpaid invoices that make up that balance. When a balance is composed of several unpaid invoices, it will help the customer if a list of those invoices is attached to the confirmation. Some customers may use a voucher system and do not maintain a detailed accounts payable subsidiary ledger. As an alternative to confirming the whole balance, the auditor can confirm one or more selected unpaid invoices to improve the useful response rate.

UNDELIVERABLE CONFIRMATIONS The auditor should determine the cause of confirmations returned as undeliverable. If the wrong address was used, the correct address should be obtained and another request sent. It is possible that the customer does not exist. Every effort should be made to determine the customer's existence. For example, the customer's name and address could be verified in the telephone directory, in the publication of a credit rating service.

CONFIRMATIONS RECEIVED VIA FAX OR ELECTRONICALLY In order to validate confirmations received via fax or electronically, the auditor should consider verifying by telephone with the purported sender the source and contents of the response and asking the sender to mail the original confirmation directly to the auditor.

FOLLOW-UP TO NONRESPONSES: POSITIVE CONFIRMATIONS Follow-up procedures are required for positive confirmations that are not returned within a reasonable time after being mailed, such as two weeks. Second, and sometimes third, requests are mailed. If the amount being confirmed is relatively large, the auditor may consider calling the customer to encourage a reply.

When customers do not respond to the positive confirmation requests, the auditor should perform other procedures to verify the existence and validity of the receivable, referred to as **alternative procedures**. Remember that mailed confirmations represent only a sample of the many account balances shown in the client's records. The results of the sample are intended to represent the total population; thus, it is important that the auditor develop sufficient follow-up procedures to gain satisfaction as to the correctness of each of the balances selected for confirmation. Alternative procedures that can be considered include:

- *Subsequent collection of the balance after year-end*—Care should be taken to ensure that these subsequent receipts relate to the balance as of the confirmation date, not to subsequent sales.

Evidence obtained from testing subsequent collections is often believed to be a stronger indicator of the validity of the customer's balance than is a confirmation. If a significant amount of the year-end receivables balance is normally collected before the end of the audit (which is likely to be one to two months after the balance sheet date), the auditor may choose to emphasize tests of subsequent collections and minimize or eliminate confirmation work. In a computerized environment, subsequent receipts may be identified using special computer programs. Testing subsequent collections provides strong evidence about both the existence and collectibility of the related receivables.

- *Examination of supporting documents*—If all, or a portion, of the balance has not been collected, documents supporting the uncollected invoices should be examined. These documents include customer orders, sales orders, bills of lading or internal shipping documents, and sales invoices. Evidence obtained from some types of customer orders, internal shipping documents, and sales invoices is not as persuasive, however, as that obtained from subsequent receipts or confirmations because such documents are not external to the client. Bills of lading become very important because they provide independent verification of shipments.

FOLLOW-UP TO NONRESPONSES: NEGATIVE CONFIRMATIONS The basic premise underlying negative confirmations is that if no response is received, the auditor may assume that the customer agrees with the balance and no follow-up procedures are required. This is not always the correct assumption. The customer may not respond even though the balance is wrong, because (1) the letter was lost, misplaced, or sent to the wrong address; (2) the customer did not understand the request; or (3) the request was simply ignored and thrown away. The auditor must have some assurance that the reliability of the negative confirmation process is not compromised because of any of the factors



Fraud studies show that fictitious receivables often have P. O. box addresses that can be accessed by management to sign confirmations. The auditor may need to use other methods to verify large accounts when receivables seem unusually high. If subsequent collections are not forthcoming, the auditor should consult business directories and published financial statements to verify the existence of a customer.


**PRACTICAL
point**

There are significant limitations to using negative confirmations as a source of audit evidence.

just described. The auditor does not expect that a large number of negative confirmations will be returned. Experience shows that negative confirmations are returned for the following reasons:

- The customer did not understand the request.
- The customer confirms an incorrect amount because there are payments or shipments in transit.
- The amount recorded by the client is in error.

The auditor must perform follow-up work to determine whether the confirmed amount really represents a misstatement. The auditor might look at subsequent cash receipts or vouch back to the customer's order and evidence of shipment to help make this assessment. If the auditor determines there are errors, expanded procedures need to be utilized to (1) determine the underlying cause of the errors, and (2) estimate the amount of misstatement in the account balance.

Negative confirmations are considered less expensive than positive confirmations, but it must also be recognized that the evidence provided is less persuasive.

FOLLOW-UP PROCEDURES: EXCEPTIONS NOTED Customers are asked to provide details of any known differences between their own records and the amount shown on the confirmation. Differences are often referred to as **exceptions**. The auditor or the client's internal auditors should carefully investigate exceptions. The auditor must be sure that the cause of any difference is properly identified as a customer error, a timing difference, an item in dispute, or a misstatement. Misstatements need to be projected to the entire population of receivables before determining whether there may be a material misstatement in the account balance. If the projected amount of misstatement appears to have a material effect on the financial statements, the magnitude and cause of such misstatement should be discussed with the client to decide whether a client investigation should precede further audit work. If subsequent work supports the conclusion of material misstatement, an adjustment will be required, and the client should adjust both the subsidiary and general ledger records to reflect that adjustment.

Some exceptions noted by customers are **timing differences** caused by transactions that are in process at the confirmation date, such as in-transit shipments or payments. If the auditor can determine that the timing difference did not result in recording the receivable in the wrong period, the differences do not represent misstatements in the account balance. What appears to be a timing difference may actually be the result of lapping, which is a way to cover up the embezzlement of cash. Lapping is an irregularity that may be detected by confirmations, as described in the *Auditing in Practice* feature.

**ACL
APPLICATION**

ACL can be used to identify any unusual looking transactions and can develop a printout for auditor verification.

PROCEDURES WHEN ACCOUNTS ARE CONFIRMED AT AN INTERIM DATE If the internal controls surrounding receivable transactions are strong, and the auditor has chosen to confirm receivables at a date prior to the balance sheet date, additional evidence must be gathered to ensure that no material misstatements have occurred between the confirmation date and year-end (the **roll-forward period**). The procedures used in gathering the additional evidence are often referred to as **roll-forward procedures** and include the following:

- Compare individual customer balances at the interim confirmation date with year-end balances and confirm any that have substantially increased.
- Compare monthly sales, collections, sales discounts, and sales returns and allowances during the roll-forward period with those for prior months and prior years to see if they appear out of line; if they do, obtain an explanation from management and acquire corroborative evidence to determine if that explanation is valid.
- Reconcile receivable subsidiary records to the general ledger at both the confirmation date and year-end.

AUDITING IN PRACTICE

Lapping: An Accounts Receivable Irregularity

Lapping is a technique used to cover up the embezzlement of cash. Lapping is most likely to occur when there is an inadequate segregation of duties—an employee has access to cash or incoming checks and to the accounting records. The employee steals a collection from a customer. However, that customer does not receive credit for the payment. If no other action is taken, that customer will detect the absence of the credit for payment on the next monthly statement. To prevent detection, the employee covers the defalcation by posting another customer’s payment to the first customer. Then the second customer’s account is missing credit, which is covered up later when a subsequent collection from a third customer is posted to the second customer’s account (hence the term *lapping*). At no time will any customer’s account be very far behind in the posting of the credit. Of course, there will always be at least one customer whose balance is overstated unless the employee repays the stolen cash.

The defalcation can take place even if all incoming receipts are in the form of checks. The employee can either restrictively endorse it to another company, or go to another bank and establish an account with a similar name. If the lapping scheme is sophisticated, very few accounts will be misstated at any one time. Because the auditor selects only a sample for confirmation purposes, it is important that all differences be investigated and the cause for any exceptions determined rather than rationalizing the exception away as an isolated instance. Detailed entries in the cash receipts journal related to credits posted to that customer’s account should be traced to the details on the related deposit slips and remittance advices. If the amount the customer paid exceeds the amount of the credit to the account, the detail in the cash receipts journal will not agree with the detail on the deposit slip or with the remittance advice. The pattern of the error should be noted for further investigation.

- Test the cutoff of sales, cash collections, and credit memos for returns and allowances at year-end.
- Scan journals to identify receivables postings from unusual sources and investigate unusual items.
- Compute the number of days’ sales in receivables at both the confirmation date and year-end, and compare these data with each other and with data from prior periods.
- Compute the gross profit percentage during the roll-forward period, and compare that to the percentage for the year and for prior periods.

The purpose of performing these procedures is to search for evidence concerning the auditor’s tentative conclusion that environment risk is low and that the accounts do not contain material misstatements. Note, however, that if the interim confirmation work shows the existence of material misstatements, the auditor would perform year-end detailed testing rather than just performing the roll-forward procedures.

SUMMARIZING CONFIRMATION WORK The confirmation work should be summarized to show the extent of dollars and items confirmed, the confirmation response rate, the number and dollar amount of exceptions that were not misstatements, and the number and amount of exceptions that were misstatements (cross-referenced to the detailed explanation and disposition thereof). Such a summary helps the reviewers quickly grasp the extent and results of this work. The following is an example of such a summary.

	Items	Amount
Population	3,810	5,643,200.00
Positive confirmations	29	193,038.71
Percent	0.76%	3.42%
Responses	27	180,100.11
Percent	93.1%	93.3%
Exceptions	5	32,061.50
Cleared	4	19,105.82
Misstatements—B-4	1	971.68
Projected to population		30,446.31

RELATED-PARTY RECEIVABLES

Amounts due from officers, employees, affiliated companies, or other related parties should be separately disclosed. Audit procedures directed toward the identification of related-party transactions include:

- Reviewing SEC filings
- Reviewing the accounts receivable trial balance
- Inquiring of management
- Communicating the names of identified related parties so that the audit team members can be alert to related-party transactions

NONCURRENT RECEIVABLES

Receivables that are not due within the normal operating cycle or one year (whichever is longer) should be listed as a noncurrent asset. For example, a receivable arising from the sale of a fixed asset and due three years hence, or due in installments over a three-year period, should be classified wholly or in part as a noncurrent asset unless the client's operating cycle covers the entire period of collection. Audit procedures to identify misclassified receivables include making inquiries of management, reviewing the aged trial balance for large old outstanding balances, reading the board of directors' minutes, and scanning the subsidiary ledger to identify unusually large receivable balances, particularly those that resulted from a single transaction that was posted from an unusual source.

Sold, Discounted, and Pledged Receivables

Receivables that have been sold with recourse, discounted, or pledged as collateral on loans should be disclosed. Audit procedures that would reveal these ownership and disclosure items include:

- Inquiring of management
- Scanning the cash receipts journal for relatively large inflows of cash that are posted from unusual sources
- Obtaining bank confirmations, which include information on obligations to the bank and loan collateral
- Reviewing the board of directors' minutes, which generally contain approval for these items

Few but Large Sales—Confirmation of Sales

In some businesses, the balance in the Sales account is made up of relatively few transactions, but each transaction is for a large dollar amount. For example, a company selling supercomputers may sell only 10 or 20 computers during the year. In such situations, the auditor should review sales contracts, being careful to review sales recorded just prior to year-end or reviewing sales returns posted just after year-end. In some situations, the auditor may even choose to confirm recorded sales with major customers. The auditor must be careful, however, to ensure that the customer is legitimate and has a reasonable basis on which to respond to the auditor's inquiry. For an example of potential problems the auditor might face, see the *Auditing in Practice* feature.

Fraud Indicators and Audit Procedures

LO 11 Substantive tests often highlight potential *fraud indicators* such as:

- Excessive credit memo or other credit adjustments to accounts receivable after the end of the fiscal year



When a large amount of receivables is sold, the auditor must examine relevant contracts to identify potential recourse to the company.

AUDITING IN PRACTICE

Endotronics: Audit of Large Sales Transactions

Endotronics, Inc., a Minneapolis-based publicly-held company, reportedly recorded \$3.7 million in machine sales to a Japanese company, its largest customer. The Japanese company had a common name (like Yamaha, Inc.), but was in fact a small shell company with few financial resources. Endotronics was under pressure to show increasing sales and profitability to obtain larger contracts and municipal financing of expanded plant capacity.

The company engaged in “bill-and-hold” sales, whereby a sales transaction for goods was recorded, but the equipment was stored in a warehouse near the Minneapolis-St. Paul International airport rather than shipping it to Japan. The auditors obtained confirmation of the sales from the customer and obtained a legal opinion from an independent law firm that the sales contract was valid. The explanation the auditors received for the customer warehousing near a U.S. airport seemed reasonable: The customer could obtain its inventory within 24 hours, and storage costs in Japan are very high. The public warehouse company also confirmed its storage of these machines. However, a warehouse spokesperson was very explicit in noting that they responded

only to specific questions asked by the auditor. In other words, the spokesperson seemed to indicate that the auditor failed to ask the critical question and therefore failed to understand the nature of the agreement with the client:

A spokesman for [the public warehouse company] said the information it supplied merely confirmed that it was holding some Endotronics machines that had been sold, or were being sold, to Japan. [The operations manager] conceded, however, that the information should have made it clear that Endotronics, not the customer, was still in control of the equipment. ‘We couldn’t ship it without getting word from Endotronics.’

It turned out the machines were still under Endotronics’ control. The customer reneged on the contract, and the client was forced into bankruptcy. In spite of all their efforts, the auditors, among others, were sued by—and paid damages to—shareholders. The auditors were also the subject of considerable negative press.

Source: “Firm That Did Endotronics Audit Says It Received Misinformation,” *Minneapolis Star and Tribune*, July 28, 1987, p. 1D.

- Customer complaints and discrepancies in accounts receivable confirmations (for example, disputes over terms, prices, or amounts)
- Unusual entries to the accounts receivable subsidiary ledger or sales journal
- Missing or altered source documents or the inability of the client to produce original documents in a reasonable period of time
- A lack of cash flow from operating activities when income from operating activities has been reported
- Unusual reconciling differences between the accounts receivable subsidiary ledger and control account
- Sales to customers in the last month of the fiscal period at terms more favorable than previous months
- Pre-dated or post-dated transactions
- Large or unusual adjustments to sales accounts just prior to or just after the fiscal year-end

The following *audit procedures* should help detect the frauds just described:

- Perform a thorough review of original source documents including invoices, shipping documents, customer purchase orders, cash receipts, and written correspondence between the client and the customer.
- Analyze and review credit memos and other accounts receivable adjustments for the period subsequent to the balance sheet date.
- Confirm with customers the terms of sales agreements, including the absence of right of return and terms that might preclude immediate revenue recognition.
- Analyze all large or unusual sales made near year-end. Vouch to original source documents. Confirm terms of the transaction directly with the customer.



Detailed audit procedures are effective in identifying most frauds.


**PRACTICAL
point**

Information technology provides opportunities for companies to develop fictitious documents to support fictitious balances. The auditor should always insist on locating documents immediately, but most especially when fraud is suspected.

- Scan the general ledger, accounts receivable subsidiary ledger, and sales journal for unusual activity.
- Perform analytical reviews of credit memo and write-off activity by comparing to prior periods. Look for unusual trends or patterns such as large numbers of credit memos pertaining to one customer or salesperson, or those processed shortly after the close of the accounting period.
- Analyze recoveries of written-off accounts.

If any of the preceding procedures were part of the original audit program, the auditor should consider expanding the extent of testing if evidence of potential fraud is discovered.

Allowance for Doubtful Accounts

LO 12

Accounts receivable should be valued at its net realizable value, that is, the gross amount customers owe less a reasonable allowance for doubtful accounts. Estimating the allowance for doubtful accounts is one of the more difficult audit tasks because, at the time of the audit, there is not a correct answer. The estimate must reflect the economic status of the client's customers, current economic conditions, and an informed expectation about default on payment. The method for developing an estimate of the appropriate allowance varies from client to client. It will be affected by the strength of the client's credit policies and the nature of its business operating environment. In many companies, the appropriate allowance will have a substantial effect on the organization's profitability—and potentially on its viability. In every audit in which accounts receivable is material, the auditor must obtain an understanding of management's approach to estimating and writing off uncollectible accounts.

ESTIMATE OF THE ALLOWANCE FOR DOUBTFUL ACCOUNTS

Recording Allowance for Doubtful Accounts and determining Bad Debts Expense for the year is the result of an accounting estimate. The allowance should reflect management's best estimate of year-end accounts receivable that will not be collected. The auditor should obtain an understanding of how management developed the estimate and use one or a combination of the following approaches to evaluate the reasonableness of the estimate:

- Review and test the process used by management to develop the estimate.
- Develop an independent model to estimate the accounts, and update the model each year based on past experience and current economic conditions.
- Review subsequent events or transactions occurring prior to completion of fieldwork, such as subsequent collections.

The auditor often uses the last two approaches for small clients whose management does not have sufficient accounting expertise to develop the estimates.

The auditor can track the history of annual write-offs and provisions for bad debts. If they are approximately equal over a period of years for stable credit sales, or approximately the same percentage of credit sales or receivables from year to year, these estimates would appear to be reasonable. Such estimates are useful but should be modified for changes in economic conditions, customer demographics, credit policies, or products. Blindly following old approaches often results in substantially underestimating a client's collection problems.

The auditor should ask management about the collectibility of customer balances that have not yet been collected in the subsequent period, particularly those that are large and long overdue. The auditor can also review credit reports from outside credit bureaus, such as Dun & Bradstreet, to help determine the likelihood of collection, and can check cus-



If the company does not have a formal process utilizing objective data to estimate uncollectible receivables, it has a significant deficiency in internal control.

customer correspondence files to provide additional insight into the collectibility of specific accounts. In some cases in which amounts are due from customers whose balance is past due or unusually large, the auditor may want to request a copy of the customer's latest financial statements to perform an independent analysis of collectibility. As noted earlier, many large firms have access to computerized databases where they can also review current articles or other business reports on large customers.

Receivables should be reported on the balance sheet at their net realizable value. The auditor and the client can legitimately disagree about the adequacy of the Allowance for Doubtful Accounts. Because the allowance is based on judgment, the auditor cannot expect a precise answer as to what this balance should be; but if the auditor believes the balance is unreasonable, the client should be asked to adjust it.

WRITE-OFFS

Accounts should be written off as soon as they are determined to be uncollectible. The auditor should inquire about the client's procedures for deciding when to write off an account, and determine whether the procedures are reasonable and are being followed. All write-offs should be approved.

In many instances, companies turn over the uncollectible amounts to a collection agency. These accounts should be monitored for subsequent collection for a period of time. It should be noted that once an account has been turned over to a collection agency, and if it is successful in obtaining collection, the agency will charge a significant percentage as the collection fee. Therefore, the client will not realize cash for all or a significant percentage of these accounts.

When customers are unable to pay their open account when due, they may be asked to sign a note receivable requiring payment within a specified period, with interest. The auditor can physically examine or confirm notes receivable. For confirmations, the auditor should ask customers to confirm not only the amount due (as for accounts receivable) but also the date of the note, the due date, the interest rate, and, when appropriate, any collateral pledged as security that should be in the client's possession but should not be included on the balance sheet.

The auditor should test the related interest income at the same time as the notes receivable. Both analytical procedures and recomputation are useful techniques for evaluating interest income. Multiplying the average notes receivable balance by the average interest rate, for example, often yields a reasonable estimate of interest income. When the amounts are material, interest income and accrued interest receivable can be recalculated for a sample of the notes; or, if there are not very many, for each note. If the note information is maintained on a computer, the auditor can use computer audit software to make these calculations.

Summary

Although most businesses have developed highly sophisticated automated control structures for recording transactions in the revenue cycle, misstatements can occur because of (1) the sheer volume of transactions that must be recorded, (2) the complexity of some sales transactions, and/or (3) pressures to record fictitious revenue. Some sales transactions are further complicated by the difficulty in determining the economic substance of the transaction. The auditor must be able to both understand and test the strength of the client's recording process and the business purpose of transactions in order to assess the environment risk in the revenue cycle. Some tests of controls are most efficiently performed by selecting and testing a sample of transactions.

Knowledge of the interrelationships among transactions, account balances, assertions, tolerable misstatement, persuasiveness of alternative procedures, and the various risk factors allows the auditor to develop an effective and efficient audit program. When detection risk is relatively low, the auditor should perform direct tests of the account balances,

perform them as of year-end, and test relatively large samples. When detection risk is moderate or high, the auditor may use more analytical procedures, perform some or all of them at an interim date, and/or use smaller sample sizes.

Significant Terms

alternative procedures Procedures used to obtain evidence about the existence and valuation of accounts receivable when a positive confirmation is not returned, including examining cash collected after the confirmation date and vouching unpaid invoices to customer's orders, sales orders, shipping documents, and sales invoices.

bill of lading A shipping document that describes items being shipped, the shipping terms, and delivery address; a formal legal document that conveys responsibility for the safety and shipment of items to the shipper.

cutoff period The few days just before and just after the balance sheet date; the number of days is chosen by the auditor, depending on the assessment of potential errors made in recording items in the incorrect period (especially sales and receivables).

cutoff tests Procedures applied to transactions selected from those recorded during the cutoff period to provide evidence as to whether the transactions have been recorded in the proper period.

cycle A group of accounts related to a particular processing task; represents a convenient way to look at the interrelationship of account balances. Normally, but not always, a transaction cycle encompasses all aspects of a transaction from its initiation to final disposition.

exceptions Differences between a customer's records and the client's records reported on positive or negative confirmations.

lapping A technique used to cover up the embezzlement of cash, whereby a cash collection from one customer is stolen by an employee who takes another customer's payment and credits the first customer. This process continues and at any point in time, at least one customer's account is overstated.

negative confirmation A request to customers asking them to respond directly to the auditor only if they disagree with the indicated balance.

positive confirmation A request to customers asking them to respond directly to the auditor if they agree or disagree with the indicated balance.

revenue cycle The process of receiving a customer's order, approving credit for a sale, determining whether the goods are available for shipment, shipping the goods, billing the customers, collecting cash, and recognizing the effect of this process on other related accounts such as Accounts Receivable and Inventory.

roll-forward period The period between an interim date, when a substantive procedure was performed, and the balance sheet date.

roll-forward procedures Procedures performed at or after the balance sheet date to update substantive evidence obtained at an interim date.

timing difference Confirmation exceptions caused by transactions that are in process at the confirmation date, such as in-transit shipments or payments. These are not misstatements.



Bilrite Practice Case

- **Module V** covers accounts receivable aging analysis and evaluation of allowance for doubtful accounts. This exercise may be completed at this time.

Review Questions

LO 1

LO 1

- 10-1 What is meant by the cycle approach to auditing?
- 10-2 What accounts are typically affected by transactions in the revenue cycle? Identify the relationships among them.

- 10-3 What are the internal control objectives in the revenue cycle? — LO 1
- 10-4 What are the major processes involved in generating and recording a sales transaction? What are the major documents generated during each process? — LO 1
- 10-5 Why should auditors ordinarily consider revenue recognition as a fraud risk area? — LO 2
- 10-6 According to the SEC, what criteria must be met before revenue can be recognized? — LO 2
- 10-7 Why might it be necessary to do some research in order to determine whether a client's revenue recognition policies are proper? — LO 2
- 10-8 What methods are used to fraudulently inflate revenue? — LO 2
- 10-9 What motivates some managements to overstate revenue? — LO 3
- 10-10 What analytical procedures can help auditors identify areas of potential misstatements? — LO 4
- 10-11 What are the audit steps associated with assessing environment risk for the revenue cycle? — LO 5
- 10-12 What are the inherent risks associated with sales and accounts receivable? — LO 5
- 10-13 How does an understanding of the client's control environment affect the audit of the revenue cycle? — LO 5
- 10-14 What important control functions are served by mailing monthly statements to customers? Why is it important to separate the duties of responding to customer complaints from the accounts receivable and cash collection functions? — LO 5
- 10-15 Monitoring controls are effective in alerting management to the potential breakdown of other internal controls. Identify two or three monitoring controls that are applicable to the revenue cycle. — LO 5
- 10-16 In assessing whether the controls are operating effectively, is it necessary for the auditor to reperform the work of the control itself? For example, if someone tests for the correctness of computations and initials the bottom of a document to indicate that such a control procedure has been performed, is it necessary for the auditor to reperform? Explain the rationale for your response. — LO 6
- 10-17 Identify the alternative methods an auditor can use to test the effectiveness of controls. — LO 6
- 10-18 How do auditors use their knowledge about the client's environment risk in designing substantive tests? — LO 7
- 10-19 What is the relationship between audit objectives, account balance assertions, and audit procedures? — LO 8
- 10-20 Explain how audit evidence gathered about accounts receivable also provides evidence about sales, and vice versa. — LO 8
- 10-21 Why is it important to directly test sales transactions as well as accounts receivable? — LO 9
- 10-22 How does the audit of revenue test the completeness assertion for accounts receivable? — LO 9
- 10-23 From what population should a sample be selected to test the completeness of recorded sales? Explain your choice. — LO 9
- 10-24 When might it be advisable to send the confirmation to the customer's personnel who are familiar with the details of sales contracts rather than to the accounts payable department? — LO 9
- 10-25 Are direct tests of account balances generally more effective in detecting overstatements or understatements? Explain. — LO 10
- 10-26 What is the effect on the nature, timing, and extent of substantive tests of accounts receivable when the environment risk is assessed as being low? — LO 10
- 10-27 What are the advantages and disadvantages of performing direct tests of account balances prior to the balance sheet date? — LO 10
- 10-28 Under what circumstances should an auditor consider confirming individual unpaid invoices as opposed to confirming the customer's total balance? — LO 10
- 10-29 What is an aged trial balance of accounts receivable? For what purposes does an auditor use it? How does an auditor determine that it is correctly aged? — LO 10

- LO 10 — 10-30 Distinguish between the positive and negative forms of accounts receivable confirmation.
- LO 10 — 10-31 Which confirmation form, the positive or the negative, is considered the more reliable? Why?
- LO 10 — 10-32 If a confirmation is not returned by a customer, what follow-up work should the auditor perform if it is a:
- Positive confirmation?
 - Negative confirmation?
- LO 10 — 10-33 Under what circumstances can a customer's confirmation be considered reliable?
- LO 10 — 10-34 When might an auditor consider using negative confirmations? What factors must be present to justify the use of the negative confirmation form?
- LO 10 — 10-35 What is a confirmation exception? Why is it important to investigate confirmation exceptions?
- LO 10 — 10-36 What evidence does vouching cash collections after the balance sheet date provide?
- LO 10 — 10-37 What are cutoff tests? What assertion(s) do they test?
- LO 11 — 10-38 What fraud indicators might be identified by direct tests of revenue cycle accounts? What audit procedures could be used to help determine if fraud actually occurred?
- LO 12 — 10-39 How can the auditor determine whether the allowance for doubtful accounts is reasonable?

Multiple Choice Questions

- LO 5 — 10-40 A manufacturing client had a substantial amount of goods returned during the last month of the fiscal year and the first month after year-end. The client recorded the returns when credit memos were issued (usually six to eight weeks after receipt of the goods). The control procedure that would have led to more timely recording of the goods would include:
- Prenumbering receiving reports, which are separately identified for goods returned and serve as a control for issuance of credit memos.
 - Aging schedules of accounts receivable prepared at year-end by individuals separate from the billing process.
 - A reconciliation of the detailed accounts receivable with the general ledger accounts receivable account.
 - Prenumbering credit memoranda and periodically accounting for all numbers.
- LO 5 — 10-41 Which of the following would *not* represent a factor the auditor would consider when assessing the inherent risk associated with a sales transaction?
- The existence of terms that specify the right of return or the right to modify the purchase agreement
 - Billing for invoices with shipment dates to be determined at a later date
 - Goods billed according to a percentage-of-completion methodology
 - The nature of the credit authorization process
- LO 5 — 10-42 The auditor generally makes a decision not to test the effectiveness of controls in operation when:
- The preliminary assessment of control risk is high.
 - It is more cost efficient to directly test ending account balances than to test control procedures.
 - The auditor believes that controls are not functioning as described.
 - All of the above
- LO 5 — †10-43 A restaurant food chain has more than 680 restaurants. Food orders at each restaurant are required to be input into an electronic device, which records the orders by servers and transmits the order to the kitchen for preparation. All

†All problems marked with a dagger are adapted from the Certified Internal Auditor Examination.

servers are responsible for collecting cash for all their orders and must turn in cash at the end of their shift equal to the sales value of food ordered for their I.D. number. The manager then reconciles the cash received for the day with the computerized record of food orders generated. Management investigates all differences immediately.

Corporate headquarters has established monitoring controls to determine when an individual restaurant might not be recording all its revenue and transmitting the applicable cash to the corporate headquarters. Which one of the following would be the best example of a monitoring control?

- The restaurant manager reconciles the cash received with the food orders recorded on the computer.
- All food orders must be entered on the computer, and there is segregation of duties between the food servers and the cooks.
- Management prepares a detailed analysis of gross margin per store and investigates any store that shows a significantly lower gross margin.
- Cash is transmitted to corporate headquarters on a daily basis.

Use the following information to answer questions 10-44 through 10-46.

An organization sells products through the catalog and takes orders over the phone. All orders are entered online and the organization's objective is to ship all orders within 24 hours. The audit trail is kept in machine-readable form. The only papers generated are the packing slip and the invoice sent to the customer. Revenue is recorded upon shipment of the goods. The organization maintains a detailed customer database that allows the customer to return goods for credit at any time. The company maintains a product database containing all the authorized prices. Only the marketing manager has authorization to make changes in the price database. The marketing manager either makes the changes or authorizes the changes by signing an authorization form, and his assistant implements the changes.

- †10-44 Which of the following controls would be *least* effective in ensuring that the correct product is shipped and billed at the approved price? LO 5
- Self-checking digits are used on all product numbers, and customers must order from a catalog with product numbers.
 - The sales order taker verbally verifies both the product description and price with the customer before the order is closed for processing.
 - The sales order taker prepares batch totals of the number of items ordered and the total dollar amount for all items processed during a specified period of time (for example, one hour).
 - The product price table is restricted to the director of marketing, who alone can approve changes to the price file.
- †10-45 The auditor wants to determine that only the marketing manager has approved changes to the product price file. Which of the following audit procedures would provide the *most* persuasive evidence that only those price changes that have been properly authorized by the marketing manager have been made? LO 5
- Use an integrated test facility (ITF) and submit product orders to the ITF. Compare the prices invoiced to the prices in the most recent catalog.
 - Use audit software to create a listing of all customer orders exceeding a specified dollar limit, and print out the results for subsequent investigation.
 - Obtain a copy of all authorized price changes and manually trace to the current edition of the organization's catalog.
 - Obtain a computerized log of all changes made to the price database. Take a random sample of changes and trace to a signed list of changes authorized by the marketing manager.

- LO 9** — †10-46 The auditor wants to gain assurance that all telephone orders received were shipped and billed in a timely fashion. Which of the following audit procedures would be most effective in meeting the auditor's objective?
- Use an integrated test facility and submit product orders to the ITF. Compare the prices invoiced with the prices in the most recent catalog.
 - Take the computer log of incoming orders and use generalized audit software to compare order date with invoice and shipping date in the sales invoice file.
 - Use test data to generate batch control totals. Trace the batch control totals from the items submitted to the sales invoice file generated for the test data.
 - Use generalized audit software to randomly select a sample of sales invoices and have the software match the items selected to the log of transactions maintained for incoming orders.
- LO 8** — 10-47 An auditor should gain an understanding of:
- Internal controls related to revenue recognition.
 - Computer applications for recording sales.
 - Key revenue related documents.
 - All of the above
- LO 9** — 10-48 To test the completeness of sales, the auditor would select a sample of transactions from the population represented by the:
- Customer order file.
 - Open invoice file.
 - Bill of lading file.
 - Sales invoice file.
- LO 9** — 10-49 The auditor is concerned that fictitious sales have been recorded. The best audit procedure to identify the existence of the fictitious sales would be to:
- Select a sample of recorded invoices and trace to shipping documents to verify shipment of goods.
 - Select a random sample of shipping documents and trace to the invoice.
 - Select a sample of customer purchase orders and trace through to the generation of a sales invoice.
 - Select a sample of invoices and trace to a customer purchase order.
- LO 10** — *10-50 The confirmation of customers' accounts receivable rarely provides reliable evidence about the completeness assertion because:
- Many customers merely sign and return the confirmation without verifying its details.
 - Recipients usually respond only if they disagree with the information on the request.
 - Customers may not be inclined to report understatement errors in their accounts.
 - Auditors typically select many accounts with small balances to be confirmed.
- LO 10** — *10-51 An auditor should perform alternative procedures to substantiate the existence of accounts receivable when:
- No reply to a positive confirmation request is received.
 - No reply to a negative confirmation request is received.
 - Collectibility of the receivables is in doubt.
 - Pledging of the receivables is probable.
- LO 10** — *10-52 Negative confirmation of accounts receivable is less effective than positive confirmation of accounts receivable because:
- Most recipients usually lack the willingness to respond objectively.
 - Some recipients may report incorrect balances that require extensive follow-up.
 - The auditor cannot infer that all nonrespondents have verified their account information.

- d. Negative confirmations do not produce evidential matter that is statistically quantifiable.
- e. All of the above
- 10-53 A customer confirmed its balance by fax. Which of the following would not reduce the risk associated with the response? LO 10
- a. Consider the fax response to be an exception.
- b. Examine subsequent collections of the account.
- c. Request the customer to mail the original confirmation to the auditor.
- d. Consider the fax to be an acceptable confirmation response.

Discussion and Research Problems

- 10-54 **(Revenue Recognition)** Judgments about whether revenue should be recognized are among the most contentious that an auditor faces. Following are a number of situations in which the auditor will be required to either acquire additional information or make decisions about the amount of revenue to be recognized. LO 2

Required

- a. Identify the primary criteria the auditor should use in determining revenue to be recognized.
- b. For each of the scenarios:
- Identify the key issues to address in determining whether revenue should be recognized.
 - Identify additional information the auditor may want to gather in making a decision on revenue recognition.
 - Based only on the information presented, develop a rationale for either the recognition or nonrecognition of revenue.

Revenue Recognition Scenarios

1. AOL sells software that is unique as an Internet provider. The software contract includes a service fee of \$19.95 for up to 500 hours of Internet service each month. The minimum requirement is a one-year contract. The company proposes to immediately recognize 30 percent of the first-year's contract as revenue from the sale of software and 70 percent as Internet services on a monthly basis as fees are collected from the customer.
2. Modis Manufacturing builds specialty packaging machinery for other manufacturers. All of the products are high-end and range in sales price from \$5 million to \$25 million. A major customer is rebuilding one of its factories and has ordered three machines with total revenue of \$45 million. The contracted date to complete the production was November and the company met the contract date. The customer acknowledges the contract and confirms the amount. However, because the factory is not yet complete, they have requested that Modis hold the products in their warehouse as a courtesy to the company until their building is complete.
3. Standish Stoneware has developed a new low-end line of bakeware products that will be sold directly to consumers and to low-end discount stores (but not Wal-Mart). The company had previously sold high-end silverware products to specialty stores and has a track record for returned items from the high-end stores. The new products tend to have more defects, but the defects are not necessarily recognizable in production. For example, the products are more likely to crack when first used in baking. The company does not have a history of returns from these products but because the products are new, the company grants each customer the right to return the merchandise for a full refund or replacement within one year of purchase.
4. Omer Technologies is a high-growth company that sells electronic products to the custom copying business. It is an industry with high innovation, but Omer's

technology is basic. In order to ensure growth, management has empowered the sales staff to make special deals to increase sales in the fourth quarter of the year. The sales deals include a price break and an increased salesperson commission. However, it does not extend either the product warranty or the customer's right to return the product.

5. Electric City is a new company in the Chicago area that has the exclusive right to a new technology that saves municipalities a substantial amount of energy for large-scale lighting purposes; for example, lighting ball fields, parking lots, and shopping centers. The technology has been shown to be very cost effective in Europe. In order to get new customers to try the product, the sales force allows the customers to try the product for up to six months to prove the amount of energy savings they will incur with the product. The company is so confident that the customers will buy the product that they provide this pilot period. Revenue is recognized at the time the product is installed at the customer location with a small provision made for potential returns.
6. Jackson Products decided to quit manufacturing a line of its products and outsourced the production. However, much of the manufacturing equipment they had could be used by other companies. In addition, they had over \$5 million of new manufacturing equipment on order in a noncancelable deal. Jackson decided to sell the new equipment ordered and their existing equipment. All of the sales were recorded as revenue.

LO 3 — 10-55 **(Research Question)** Many management frauds involve improper recording of revenue. Using *The Wall Street Journal*, *Business Week*, the SEC's Audit and Accounting Enforcement Releases (found at the website <http://www.sec.gov/enforce.htm>), and similar sources, find two or three articles reporting management fraud involving revenue and do the following:

- a. Read the articles and identify the methods the companies used to misstate revenues.

- b. Identify the procedures the auditor could have used to discover the fraud.

LO 4 — 10-56 **(Cross-sectional Analysis of Revenue Using Excel or ACL)** You are auditing Floor-Mart, a retailer with 200 stores around the country. It has two basic sizes of stores—minimarts with 3,000 square feet and maximarts with 7,500 square feet. Both types of stores carry the same types of products. The client has provided an Excel file with the square feet, sales, and inventory at each store. This file is found on the data file disk provided with the textbook. It is labeled "Floormart Data."

Required

- a. Using either Excel or ACL, identify the stores for which sales appear to be out of line with the other stores and will thus require additional evidence.
- b. What procedures would the auditor use to gather the additional evidence?

LO 4 — 10-57 **(Analytical Procedures)** Stainless Steel Specialities (SSS) is a manufacturer of hot water based heating systems for homes and commercial businesses. The company has grown about 10 percent in each of the past five years. The company has not made any acquisitions. The table at the top of the following page shows some of the statistics of the company during the past five years.

Additional information that is available to the auditor includes:

- The company has touted its new and improved technology for both the increase in sales and gross margin.
- The company claims to have decreased administrative expense thus increasing net profits.
- The company has reorganized its sales process to a more centralized approach and has empowered individual sales managers to negotiate better prices to increase sales as long as the prices are within corporate guidelines.
- The company has changed its salesperson compensation by increasing the commission on sales to new customers.



Overview of Operational Data
Stainless Steel Specialities (SSS)
(Sales and Net Income Reported in \$ Millions)

Operations	2002	2003	2004	2005	(unaudited) 2006
Sales	\$800	\$880	\$950	\$1,050	\$1,300
Net Income	\$28	\$38	\$42	\$52	\$68
Stock Price	\$17	\$24	\$19	\$28	\$47
Economic Growth in Areas Served (Index with 1.00 for 2002)	1.00	1.04	1.09	1.13	1.14
Percent of Heating Market Held by SSS	8.9%	9.4%	9.6%	10.8%	14.0%
Accounts Receivable	\$180	\$170	\$196	\$210	\$297
Percent of Sales Made in Last Quarter	38%	36%	40%	38%	43%
Gross Margin	28%	28.3%	28.8%	29.2%	33.6%

- Sales commissions are not affected by returned goods if the good are returned more than 90 days after sale.
 - Sales commissions are not affected by nonpayment by customers.
- SSS has justified the changes in sales commissions on the following grounds:
- The salesperson is not responsible for “quality” issues—the main reason that products are returned.
 - The salesperson is not responsible for approving credit. Rather credit approval is under the direction of the global sales manager.

Required

- a. What is the importance of the information about salesperson compensation to the audit of receivables and revenue? Explain how the information would be used in conducting the audit.
 - b. Perform an analytical review of the data included in the table and the information about the change in performance. What are the important insights that the auditor should gain from performing the analytical review?
 - c. Why should the auditor be interested in a company’s stock price when performing an audit since stock price is dependent, at least in part, on audited financial reports?
 - d. What data might be considered as fraud risk indicators?
 - e. Identify specific audit procedures that should be performed as a result of the analytical procedures performed by the auditor.
- 10-58 **(Audit Procedures and Objectives)** Following is a list of procedures performed in the audit of the revenue cycle. LO 5
- a. Take a block of shipping orders and account for the invoicing of all items in the block. Also account for the prenumbering of the documents.
 - b. Review the general access controls to the computer application and the authorized ability to make changes to computer price files.
 - c. Recompute the invoice total and individual line items on a sample of sales invoices.
 - d. Review client documentation to determine policy for credit authorization.
 - e. Select a sample of shipping notices and trace to invoices.
 - f. Randomly sample entries into the sales journal and trace back to sales orders and shipping documents.

Required

For each procedure, indicate the objective that is accomplished.

- *10-59 **(Misstatements and Controls)** Field, CPA, is auditing the financial statements of Miller Mailorder, Inc. (MMI) for the year ended January 31, 2006. Field has LO 5

compiled a list of possible errors and fraud that may result in the misstatement of MMI's financial statements, and a corresponding list of internal controls that, if properly designed and implemented, could assist MMI in preventing or detecting the errors and fraud.

Required

For each possible error and fraud numbered 1 through 15, select one internal control procedure from the lettered answer list that, if properly designed and implemented, most likely could assist MMI in preventing or detecting the errors and fraud. Each response in the list of controls may be selected once, more than once, or not at all.

Possible Errors and Fraud

1. Invoices for goods sold are posted to incorrect customer accounts.
2. Goods ordered by customers are shipped, but are not billed to anyone.
3. Invoices are sent for shipped goods, but are not recorded in the sales journal.
4. Invoices are sent for shipped goods and are recorded in the sales journal, but are not posted to any customer account.
5. Credit sales are made to individuals with unsatisfactory credit ratings.
6. Goods are removed from inventory for unauthorized orders.
7. Goods shipped to customers do not agree with goods ordered by customers.
8. Invoices are sent to allies in a fraudulent scheme, and sales are recorded for fictitious transactions.
9. Customers' checks are received for less than the customers' full account balances, but the customers' full account balances are credited.
10. Customers' checks are misappropriated before being forwarded to the cashier for deposit.
11. Customers' checks are credited to incorrect customer accounts.
12. Different customer accounts are each credited for the same cash receipt.
13. Customers' checks are properly credited to customer accounts and are properly deposited, but errors are made in recording receipts in the cash receipts journal.
14. Customers' checks are misappropriated after being forwarded to the cashier for deposit.
15. Invalid transactions granting credit for sales returns are recorded.

Internal Control Procedures

- a. Shipping clerks compare goods received from the warehouse with the details on the shipping documents.
- b. Approved sales orders are required for goods to be released from the warehouse.
- c. Monthly statements are mailed to all customers with outstanding balances.
- d. Shipping clerks compare goods received from the warehouse with approved sales orders.
- e. Customer orders are compared with the inventory master file to determine whether items ordered are in stock.
- f. Daily sales summaries are compared with control totals of invoices.
- g. Shipping documents are compared with sales invoices when goods are shipped.
- h. Sales invoices are compared with the master price file.
- i. Customer orders are compared with an approved customer list.
- j. Sales orders are prepared for each customer order.
- k. Control amounts posted to the accounts receivable ledger are compared with control totals of invoices.
- l. Sales invoices are compared with shipping documents and approved customer orders before invoices are mailed.
- m. Prenumbered credit memos are used for granting credit for goods returned.

- n. Goods returned for credit are approved by the supervisor of the sales department.
- o. Remittance advices are separated from the checks in the mailroom and forwarded to the accounting department.
- p. Total amounts posted to the accounts receivable ledger from remittance advices are compared with the validated bank deposit slip.
- q. The cashier examines each check for proper endorsement.
- r. Validated deposit slips are compared with the cashier's daily cash summaries.
- s. An employee, other than the bookkeeper, periodically prepares a bank reconciliation.
- t. The same employee who issues receiving reports evidencing actual return of goods approves sales returns.

10-60 **(Inherent Risks)** Drea Tech Company has been growing rapidly and has recently engaged your firm as its auditors. It is actively traded over the counter (OTC) and believes it has outgrown the service capabilities of its previous auditor. However, on contacting the previous auditor, you learn that a dispute led to the firm's dismissal. The client wanted to recognize income on contracts for items produced but not shipped. The client believed the contracts were firm, and that all the principal revenue-producing activities were performed. The change in accounting principle would have increased net income by 33 percent during the last year.

LO 5

Drea is 32 percent owned by Anthony Dreason, who has a reputation as a turn-around artist. He bought out the previous owner of Drea Tech (formerly named Johnstone Industries) three years ago. The company's primary products are in the materials handling business, such as automated conveyors for warehouses and production lines. Dreason has increased profits by slashing operating expenses, most notably personnel and research and development. In addition, he has outsourced a significant portion of component part production. Approximately 10 percent of the company's product is now obtained from Materials Movement, Inc., a privately-held company 50 percent owned by Dreason and his brother.

A brief analysis of previous financial statements shows that sales have been increasing by approximately 20 percent per year since Dreason assumed control. Profitability has increased even more. However, a tour of the plant gives the impression that it is somewhat old and not kept up-to-date. Additionally, a large amount of inventory is sitting near the receiving dock awaiting final disposition.

Required

- a. Identify the elements of inherent risk associated with the revenue cycle that the auditor should consider.
- b. For each element of inherent risk identified, briefly indicate the audit concern and suggest audit procedures to address the risks.

10-61 **(Credit Authorization)** Verona Shoe Company is considering automating its credit approval function. It manufactures a brushed pigskin shoe and acts as a wholesaler by buying closeouts of other brands and selling them to approximately 3,000 retail customers. The company has moved into new lines by recently acquiring the U.S. distribution rights to an important European brand of ski equipment and ski wear. The ski line will be sold to approximately 750 different retail outlets, but three major chains will constitute over 50 percent of the sales.

LO 5

Required

- a. What factors should the company consider in setting its credit policies? How could data normally contained in the client's computer system assist the company in setting its overall credit policies?
- b. Assume that the company chooses to automate much of its credit approval process. Outline the control procedures the company should consider using to ensure that credit is granted only in accordance with company credit policies.
- c. For each control procedure identified in part b, briefly indicate how the auditor might go about testing the effectiveness of its operation.

LO 5 — 10-62 **(Testing Credit Approval)** A client has a computerized credit approval process that incorporates various factors, such as:

- Previous credit history with the company.
- Current credit rating obtained online from Dun & Bradstreet.
- Current account balance.
- Size of proposed credit balance.
- Last credit review rating by the credit manager based on current correspondence with the customer and an analysis of the latest annual report.

The company also has a policy that the credit for an individual company, or a group of companies that are separate legal entities but are part of the same holding company, cannot exceed \$1 million.

The auditor is considering four alternatives to determine whether the credit approval function is operating correctly:

- ITF
- Generalized audit software (GAS)
- Tagging and tracing
- Manually selecting transactions and tracing through to determine that only those companies that should have been authorized credit were granted credit

Required

- a. Explain how each of the preceding approaches might be used to test the operating effectiveness of the current credit granting process.
- b. Evaluate the strengths and weaknesses of each approach, and recommend the approach that you believe would be both (1) most efficient in achieving the audit objective, and (2) most effective. State the rationale for your answer.

LO 5 — 10-63 **(Testing Controls)** Following is a list of controls typically implemented in the processing of sales transactions.

Required

- a. For each control identified, briefly indicate the financial misstatement that could occur if the control is not implemented effectively.
- b. Identify an audit procedure to test for effectiveness of the control.

Controls Typically Found in Sales Processes

1. Authorization: All transactions under \$10,000 may be approved by a computer authorization program. The credit manager must approve all transactions over \$10,000.
2. All invoices are priced according to the authorized price list maintained on the computer. Either the regional or divisional sales manager must approve any exceptions.
3. All shipping documents are prenumbered and periodically accounted for. Shipping document references are noted on all sales invoices.
4. Customer complaints regarding receipt of goods are routed to a customer service representative. Any discrepancies are immediately followed up to determine the cause of the discrepancy.
5. All merchandise returns must be received by the receiving department and recorded on prenumbered documents for receipts. A document is created for each item (or batches of like items). Returns are sent to quality control for testing, and a recommendation for ultimate disposition is made (scrap, rework and sell as a second, or close out as is), noted, and sent to accounting for proper inventorying.
6. The quantity of items invoiced is reconciled with the packing document developed on receipt of the order and the shipping notice by a computer program as the goods are marked for shipment. If discrepancies appear, the shipping document prevails. A discrepancy report is prepared daily and sent to the warehouse manager for follow-up.

7. The company pays all freight charges, but the customer is charged a freight fee based on a minimum amount and a sliding scale as a percentage of the total invoice. The policy is documented and the computer automatically adds the charge.

- 10-64 **(Credit Card Sales)** Jason Co. accepts VISA and MasterCard for any sales transaction exceeding \$50. The company has not yet implemented online recording of the credit card transaction, but it does have a toll-free number to call for authorization for all sales over \$50. The company has two cash registers, but three clerks work during peak times. The company processes credit card sales as follows.

LO 5

Blank credit card slips are maintained near the cash register along with two card imprinters. The card imprinter imprints the company's account identification and takes an imprint of the customer's credit card. Normally, credit card sales are rung up on the cash register, as would be done with a cash sale. The credit card receipts are kept in a separate location in the cash register. During peak times, however (such as clearance sales), a special line is set up for credit card customers. The totals are calculated on a regular calculator, and a credit slip is prepared and run through the imprinter. The credit card slips are stored in a convenient location and are recorded on a cash register later in the day. Periodically in the day, the store manager collects all credit card receipts, separates the two copies into one for the store and one for the bank, batches all the slips, and prepares an entry to later record the sales. The batches for the day are collected for a deposit. The controller then reconciles the deposits made each day with the credit card sales recorded.

Required

- Identify the strengths and weaknesses of the controls for credit card sales just identified.
- For each deficiency noted, identify the potential effect on the company's financial statements.

- 10-65 **(Exception Reports)** Computerized accounting systems have the ability to generate exception reports that immediately identify control procedure failures or transactions that are out of the norm, so that management can determine whether any special action is needed.

LO 5

Required

- Identify how the auditor might use each type of exception report noted below in assessing the effectiveness of controls.
- If the exceptions are properly followed up and corrected, would the fact that many exceptions occurred affect the auditor's judgment of control risk? Explain.

Types of Exception Reports—Sales Processing

- A list of all invoices over \$5,000 for which credit was not preauthorized by the credit manager. (The computer program is designed so that if the authorization is not provided within 24 hours of the original notice to the credit manager, the shipment is made as if it were authorized.) This exception report goes to the credit manager.
- A report of any sales volume to one customer exceeding \$2 million in a month is sent to the sales manager with a copy to the credit manager.
- A report of exceptions for which shipping documents and packing slips did not reconcile.
- A report noting that goods ordered were not shipped (or back-ordered) within five days of receipt of the order as is required per company policy.

- 10-66 **(Audit of Sales Transactions)** The audit of the revenue cycle accounts of Acco, Inc., has been planned with a low preliminary assessment of control risk related to each of the relevant assertions. A sample of sales transactions was audited. Each

LO 7



of the following types of control or transaction processing deviations uncovered in the sample was significant enough to cause the auditor to increase control risk assessment from low to moderate.

Required

Discuss the type of financial statement misstatement that may result, the assertion(s) affected, and the effect on the nature, timing, and/or extent of related substantive tests. Each type of failure should be considered independently from the others.

- a. No evidence that price and quantity on the invoice were compared with the supporting documents
- b. Failure to approve customer credit before shipping the merchandise on open account
- c. Recording sales before they were shipped
- d. Recording sales several days after they should have been recorded
- e. Several sales were recorded before and several after they should have been recorded
- f. Lack of customer orders; items were shipped
- g. Lack of shipping documents; customer order was found
- h. Invoice price was wrong
- i. Quantity shipped differed from the quantity billed

LO 9

10-67

(Auditing Revenue-Authorized Prices) All invoicing for a company is done on a computer system from a price list table incorporated into the system. Only the sales department can change the prices on the approval of the department manager. One copy of the up-to-date price list is printed monthly for verification purposes and is maintained in the sales department. The sales department keeps a list of all changes. The master price printouts are maintained for three months. The quarterly printouts, however, are maintained for one year.

Required

Identify two ways in which the auditor might gain assurance that sales transactions are properly valued.

LO 9

10-68

(Directional Testing and Dual-Purpose Tests) During a discussion, one auditor noted that her approach to testing sales transactions was to select a random sample of recorded sales and trace back through the system to supporting documents, noting that all items billed were shipped and were invoiced at correct prices. She stated that she then had good confidence about the correctness of the sales account, and thus having performed a dual-purpose test, the remaining work on sales (assuming the procedures also evidenced the working of control procedures) could be limited.

A second auditor disagreed. Her approach was to select evidence of shipments, such as prenumbered shipping documents, and then trace forward through the system to the actual invoice, noting the existence of control procedures and the correctness of the invoice processing. If no exceptions were noted, however, she agreed with the first auditor that the remaining audit work on the sales account could be limited.

Required

- a. Which auditor is right, or are both right? Explain.
- b. What assertion is tested by the second auditor?
- c. What is a dual-purpose test? Explain why the tests performed by both of the auditors would or would not be considered dual-purpose tests.

LO 9

*10-69

(Audit of Rent Revenue) Bert Finney, CPA, was engaged to conduct an audit of the financial statements of Clayton Realty Corporation for the month ending January 31, 2006. The examination of monthly rent reconciliation is a vital portion of the audit engagement.

The following rent reconciliation was prepared by the controller of Clayton Realty Corporation and was presented to Finney, who subjected it to various audit procedures:

Clayton Realty Corporation
Rent Reconciliation
For the Month Ended January 31, 2006

Gross apartment rents (Schedule A)	\$1,600,800†
Less vacancies (Schedule B)	<u>20,500†</u>
Net apartment rentals	\$1,580,300
Less unpaid January rents (Schedule C)	<u>7,800†</u>
Total	\$1,572,500
Add prepaid rent collected (Apartment 116)	<u>500†</u>
Total cash collected	<u><u>\$1,573,000†</u></u>

Schedules A, B, and C are available to Finney but are not presented here. Finney has conducted a study and evaluation of the system of internal control and found that the system could be counted on to produce reliable accounting information. Cash receipts from rental operations are deposited in a special bank account.

Required

- 10-70 What substantive audit procedures should Finney employ during the audit to substantiate the validity of each of the dollar amounts marked by the dagger (†)? **(Performing a Cutoff Test)** The following sales were selected for a cutoff test of Genius Monitors, Inc., for the December 31, 2006, financial statements. All sales are credit sales and are FOB shipping point. They are recorded on the billing date. LO 9

Invoice Number	Sales Price	DATE	
		Shipped	Billed
36590	2,750	12/28/06	12/29/06
36591	25,390	12/29/06	1/2/07
36592	9,200	1/3/07	12/31/06
36593	570	1/2/07	1/3/07

Required

- a. What adjusting journal entries, if any, would you make for each of these items? (Do not consider the inventory implications of this cutoff.)
- b. What complications do shipping terms of FOB destination create?
- c. Under what circumstances might an auditor accept sales that are recorded when shipped, even though they are shipped FOB destination?
- 10-71 **(Audit of Membership Fees)** You are auditing the revenue from membership fees of your local chapter of the Institute of Management Accounting, of which you are not a member. The local chapter receives an allocation of national dues. LO 9

Required

- Describe some analytical procedures you could use to provide some assurance that such revenue is fairly stated.
- 10-72 **(Cutoff Procedures)** Sales cutoff tests are performed to obtain evidence that sales are recorded in the proper period. You are to perform a cutoff test of sales for a manufacturer that uses prenumbered bills of lading and sales invoices. All sales are FOB shipping point. LO 9

Required

How would you perform the cutoff test if the primary audit concern is the:

- Existence of sales?
- Completeness of sales?

LO 10

*10-73 **(Accounts Receivable Audit Procedures)** Sean Edwards, CPA, is engaged to audit the financial statements of Matthews Wholesaling for the year ended December 31, 2006. Edwards obtained and documented an understanding of the internal controls relating to the accounts receivable and assessed control risk relating to accounts receivable at the maximum level. Edwards requested and obtained from Matthews an aged accounts receivable schedule listing the total amount owed by each customer as of December 31, 2006, and sent positive confirmation requests to a sample of the customers.

Required

What additional substantive audit procedures should Edwards consider applying in auditing the accounts receivable?

LO 10

*10-74 **(Accounts Receivable Lapping)** During the year, Strang Corporation began to encounter cash flow difficulties, and a cursory review by management revealed receivable collection problems. Strang's management engaged Elaine Stanley, CPA, to perform a special investigation. Stanley studied the billing and collection cycle and noted the following.

The accounting department employs one bookkeeper who receives and opens all incoming mail. This bookkeeper is also responsible for depositing receipts, filing daily remittance advices, recording receipts in the cash receipts journal, and posting receipts in the individual customer accounts and the general ledger accounts. There are no cash sales. The bookkeeper prepares and controls the mailing of monthly statements to customers.

The concentration of functions and the receivable collection problems caused Stanley to suspect that a systematic defalcation of customers' payments through a delayed posting of remittances (lapping of accounts receivable) is present. Stanley was surprised to find that no customers complained about receiving erroneous monthly statements.

Required

Identify the procedures that Stanley should perform to determine whether lapping exists. Do not discuss deficiencies in the system of internal control.

LO 9,10

10-75 **(Existence and Completeness)** The existence and completeness assertions are complementary but require different audit approaches.

Required

- Why is it more difficult to test for the completeness than the existence/occurrence of an account balance or a class of transactions?
- What procedures can an auditor use to test the completeness of accounts receivable and sales?

LO 10

10-76 **(Using Generalized Audit Software: Receivables)** Your audit client, Daman, Inc., has a fully computerized accounts receivable system. There are two master files, a customer data file, and an unpaid invoice file. The customer data file contains the customer's name, billing address, shipping address, identification number, phone number, purchase and cash payment history, and credit limit. For each unpaid invoice, the second file contains the customer's identification number, invoice number and date, date of shipment, method of shipment, credit terms, and gross invoice amount.

Required

Discuss how generalized audit software could be used to aid in the examination of Daman's accounts receivable.

LO 10

10-77 **(Audit of Notes Receivable)** You are in charge of your second yearly examination of the financial statements of Clark Equipment Corporation, a distributor of construction equipment. Clark's equipment sales are either outright cash sales or a

combination of a substantial cash payment and one or two 60- or 90-day nonrenewable interest-bearing notes for the balance. Title to the equipment passes to the customer when the initial cash payment is made. The notes, some of which are secured by only the customer's credit, are dated when the cash payment is made (the day the equipment is delivered). If the customer prefers to purchase the equipment under an installment payment plan, Clark arranges for the customer to obtain such financing from a local bank.

You begin your fieldwork to examine the December 31 financial statements on January 5, knowing that you must leave temporarily for another engagement on January 7 after outlining the audit program for your assistant. Before leaving, you inquire about the assistant's progress on the examination of notes receivable. Among other things, he shows you a working paper listing the makers' names, the due dates, the interest rates, and amounts of 17 outstanding notes receivable totaling \$100,000. The working paper contains the following notations:

1. Reviewed internal controls and found them to be satisfactory.
2. Total of \$100,000 agrees with general ledger control account.
3. Traced listing of notes to sales journal.

The assistant also informs you that he is preparing to request positive confirmations of the amounts of all outstanding notes receivable, and that no other audit work has been performed in the examination of notes receivable and interest arising from equipment sales. There were no outstanding accounts receivable for equipment sales at the end of the year.

Required

- a. What information should the assistant confirm with the customers?
- b. State the objectives of auditing the notes receivable, and list additional audit procedures that the assistant should apply in his audit of the account for notes receivable arising from equipment sales (Clark has no other notes). No subsidiary ledger is maintained.
- c. You ask your assistant to examine all notes receivable on hand before you leave. He returns in 30 minutes from the office safe where the notes are kept and reports that notes on hand that have dates prior to January 1 total only \$75,000. List the possible explanations that you would expect from the client for the \$25,000 difference. (Eliminate fraud or misappropriation from your consideration.) Indicate beside each explanation the audit procedures you would apply to determine whether it is correct.

10-78 (ACL Project—Accounts Receivable) You are auditing accounts receivable of HUSKY Corp. as of December 31, 2006. The accounts receivable general ledger balance is \$4,263,919.52. The data files should be downloaded from the website <http://rittenberg.swlearning.com>. The files are labeled "HUSKY Unpaid Invoices 2006" (the 12/31/2006 unpaid invoices), "HUSKY Shipping File 2006" (contains the shipment numbers and shipment dates for those invoices), and "HUSKY Credit Limit 2006" (contains each customer's credit limit). Sales are made FOB shipping point. The auditor has verified that the last shipment in 2006 is numbered 62050 and that shipping numbers have been used in proper sequence.

Required

- a. Using ACL:
 1. Foot the file of unpaid invoices using the menu option "**Analyze**" then "**Statistical**" then "**Statistics**" and agree to the general ledger. Print the statistics for the audit documentation and note the other statistics provided.
 2. Identify customers with balances over their credit limit and print out the results. (Hint: Before combining files, be sure the matching fields, such as CUSTNUM or INVNUM, have been changed in each table from a number format to ASCII format using the menu item "**Edit**" then "**Table Layout**." Double click on the field you want to change.

LO 10



3. Perform a sales cutoff test to identify any unpaid invoices shipped after 12/31/06 and print out the results including the total of those invoices. (Hint: Combine the shipping file with the unpaid invoice file to identify any unpaid invoices with shipping numbers greater than 62050.)
 4. Age the unpaid invoices, print the aging and graph of the aging, and extract (by double clicking on the over 45 days aging indicator) and print out a list of invoices over 45 days old that also shows the total of those invoices.
 5. Summarize your results and describe what procedures should be performed based on those results.
- b. Use ACL to stratify the population of customer balances, print the results, and describe how this information could be used to help determine which balances to confirm.

LO 10

10-79 (Follow-up Work—Accounts Receivable) You have sent confirmations to 40 customers of Berg-Shovick Express, a long-time audit client experiencing some financial difficulty. The company sells specialized high-technology goods. You have received confirmations from 32 of the 40 positive confirmations sent. A small number of errors were noted on these accounts, but the projected amount of errors on the confirmations returned is just below tolerable error. The following information is available to you:

Book value of receivables	\$7,782,292
Book value of items selected for confirmations	\$3,100,110
Book value of items confirmed	\$1,464,000
Audit value of items confirmed	\$1,335,000

Summary of items selected but confirmations not returned:

Name	Outstanding Amount	Management Comments on Account Balance
Yunkel Specialty Mfg.	\$432,000	Regular sales, but extended credit terms were given on \$200,000 of goods. Yunkel has responded that it does not respond to confirmations.
Hi-Tech Combonitics	\$300,000	No response to either confirmation request. Management indicates the sale was a special-term sale, and the goods are being held for the convenience of this company. The company is located in Albuquerque, New Mexico, and recently had a fire in its main production plant but expects to resume production early next month. The goods will be shipped as soon as production begins, but the sale has legally been completed.
Beaver Dam Electronics	\$275,000	Account balance represents sales of specialty products made in late December. The president of Berg-Shovick has orally confirmed the receivable because Beaver Dam electronics is 50% owned by him.
California Hi-Fi	\$200,000	Regular sales, but company has renegotiated its account balance due because of defective merchandise. Management indicated it has issued a credit to the company, but because management inspected the goods on the customer's property, it did not require the return of the merchandise. It expects the company to pay the \$200,000.
Brenner Specialties	\$175,000	Regular sales. This is a new company. Most of the sales (\$100,000) were made in December.

Name	Outstanding Amount	Management Comments on Account Balance
Sprague Electronics	\$100,000	Regular sales. Customer is negotiating a potential return of defective items.
Williams Pipeline	\$100,000	Williams is a large company. Prior experience indicates that it does not respond to confirmations.
Long Tom Towers	\$ 54,110	Customer is new this year and is located in Medicine Hat, Alberta.

Required

- Indicate the audit procedures (and be specific as to what those procedures will be doing) to complete the work on accounts receivable related to the confirmation process. In other words, identify the specific alternative audit procedures that should be performed. (*Note:* You do not need to specify a particular procedure for each account balance, but you must indicate the necessary procedures that would address all of the open items.)
- Assuming that all items could not be cleared to the auditor's satisfaction, identify the audit procedures that should be implemented to finish auditing the valuation of accounts receivable.

Cases

- 10–80 **(MiniScribe)** (Based on “Cooking the Books,” *The Wall Street Journal*, September 11, 1989; and “MiniScribe’s Investigators Determine That ‘Massive Fraud’ Was Perpetrated,” *The Wall Street Journal*, September 12, 1989.)

LO 3

In October 1988, MiniScribe, a computer disk drive manufacturer, announced its thirteenth consecutive record-breaking quarter, while its competitors were laying off hundreds of employees. MiniScribe’s receivables had increased significantly, and inventories had increased to a dangerous level because disk drives can become obsolete from one quarter to the next. The company’s stock price had quintupled in just two years. It had apparently risen from the dead under the leadership of Q. T. Wiles, who had resurrected other companies and was known as “Dr. Fix-It.” It looked as if he had done it again.

Seven months later, it was announced that MiniScribe’s sales gains had been fabricated. What was supposed to be the crowning achievement of Wiles’s career became an epitaph; he resigned and is living in near seclusion. An internal investigation concluded that senior management apparently perpetrated a massive fraud on the company, its directors, its outside auditors, and the investing public. Most of MiniScribe’s top management was dismissed, and layoffs shrank its employment by more than 30 percent in one year. MiniScribe might have to write off as much as \$200 million in bad inventory and uncollectible receivables.

Wiles’s unrealistic sales targets and abusive management style created a pressure cooker that drove managers to cook the books or perish. And cook they did—booking sales prematurely, manipulating reserves, and simply fabricating figures—to maintain the illusion of unbounded growth even after the industry was hit by a severe slump.

When Wiles arrived at MiniScribe in mid-1985, it had just lost its biggest customer, IBM, which decided to make its own drives. With the personal computer industry then slumping, MiniScribe was drowning in red ink.

Dr. Fix-It’s prescription was to cut 20 percent of the workforce and overhaul the company from top to bottom. As part of the overhaul, several semiautonomous divisions were created. Each division manager set the division’s own budget, sales quotas, incentives, and work rules. The company became a chaotic

Babel of at least 20 mini-companies that were constantly being changed and re-organized. One employee held 20 different positions in less than seven years.

Wiles turned up the heat under his lieutenants. Four times a year, he would summon as many as 100 employees for several days of intense meetings, at which they were force-fed his idiosyncratic management philosophy. At one of the first such meetings he held, Wiles demanded that two controllers stand, and he fired them on the spot, saying, “That’s just to show everyone I’m in control of the company.”

At each of these meetings, division managers had to present and defend their business plans. Invariably, Wiles would find such plans deficient and would berate their authors in front of their peers. A former controller says Wiles would throw, kick, and rip the plan books that displeased him, showering his intimidated audience with paper while yelling, “Why don’t you understand this? Why can’t you understand how to do this?”

Then something changed. Wiles started saying, “I no longer want to be remembered as a turnaround artist. I want to be remembered as the man who made MiniScribe a billion-dollar company.” Sales objectives became the company’s driving force, and financial results became the sole determinant of whether bonuses were awarded. Wiles said, “This is the number we want to hit first quarter, second quarter, third quarter, and so on,” and it was amazing to see how close they could get to the number they wanted to hit.

Hitting the number became a company-wide obsession. Although many high-tech manufacturers accelerate shipments at the end of a quarter to boost sales—a practice known as “stuffing the channel”—MiniScribe went several steps beyond that. On one occasion, an analyst relates, the company shipped more than twice as many disk drives to a computer manufacturer as had been ordered: A former sales manager says the excess shipment was worth about \$9 million. MiniScribe later said it had shipped the excess drives by mistake. The extras were returned—but by then MiniScribe had posted the sale at the higher number. Wiles denied this practice.

Other accounting maneuvers involved shipments of disk drives from MiniScribe’s factory in Singapore. Most shipments went by airfreight, but a squeeze on air cargo space toward the end of each quarter would force some shipments onto cargo ships, which required up to two weeks for transit. On several occasions, said a former division manager, MiniScribe executives looking to raise sales changed purchase orders to show that a customer took title to a shipment in Singapore when, in fact, title would not change until the drives were delivered in the United States.

MiniScribe executives tried to persuade an audit team that 1986 year-end results should include as sales the cargo on a freighter that they contended had set sail in late December. The audit team declined to do so. Eventually, the cargo and the freighter, which did not exist, were simply forgotten.

MiniScribe executives also found other ways to inflate sales figures. One was to manipulate reserves for returns of defective merchandise and bad debts. The problem of inadequate reserves grew so great that private analysts began noticing it. MiniScribe was booking less than 1 percent reserves: The rest of the industry had reserves ranging from 4 percent to 10 percent.

To avoid booking losses on returns in excess of its skimpy reserves, defective drives would be tossed onto a “dog pile” and booked as inventory. Eventually, the dog-pile drives would be shipped out again to new customers, continuing the cycle. Returns of defective merchandise ran as high as 15 percent.

At a time of strong market demand, such ploys enabled MiniScribe to seem to grow almost exponentially, posting sales of \$185 million in 1986 and \$362 million in 1987. In early 1988, Wiles was confidently forecasting a \$660 million year, and he held fast to his rosy forecast even as disk drive sales started slipping

industry-wide in late spring and nose-dived in the autumn. Meanwhile, Wiles increased the pressure on his managers. Division reports would be doctored as they rose from one bureaucratic level to the next.

Before long, the accounting gimmickry became increasingly brazen. Division managers were told to “force the numbers.” Workers whispered that bricks were being shipped just so a division could claim to have met its quota. Others joked that unwanted disk drives were being shipped and returned so often that they had to be repackaged because the boxes wore out.

Employees also joked about shipments to “account BW,” an acronym for “big warehouse.” But that wasn’t just a joke. MiniScribe established several warehouses around the country and in Canada as “just-in-time” suppliers for distributors. Customers weren’t invoiced until they received shipments from the warehouses. MiniScribe, however, was booking shipments to the warehouses as sales. The number of disk drives shipped to the warehouses was at MiniScribe’s discretion. It is estimated that between \$80 million and \$100 million worth of unordered disk drives went to the warehouses.

Wall Street began to smell trouble. Analysts could find no significant customers other than Compaq to support MiniScribe’s bullish forecasts. Several major anticipated orders from Apple Computer and Digital Equipment Corp. fell through. MiniScribe reported a fourth-quarter loss and a drop in net income for 1988 despite a 66 percent increase in sales—on paper, that is. A week later, Wiles abruptly resigned. The stock price tumbled from a high of \$15 to less than \$3 per share, a decline that upset many stockholders.

An investigative committee of MiniScribe’s outside directors reported that senior company officials:

- Apparently broke into locked trunks containing the auditors’ working papers during the year-end 1986 audit and changed inventory figures, inflating inventory values by approximately \$1 million.
- Packaged bricks and shipped them to distributors as disk drives in 1987, recording \$4.3 million in sales; when the shipments were returned, MiniScribe inflated its inventory by the purported cost of the bricks.
- Packaged approximately 6,300 disk drives that had been contaminated to inflate inventory during the fourth quarter of 1988.

Several lawsuits have been filed charging MiniScribe with engineering phony sales artificially to inflate its stock to benefit insiders. The suits also charge that its auditors participated in the conspiracy by falsely certifying the company’s financial statements. The auditor ultimately paid \$95 million to settle the lawsuits against it.

Required

Write an analysis of MiniScribe’s rise and fall, identifying the following:

- a. How MiniScribe inflated its financial statements
- b. The factors that led to the inflated financial statements
- c. The red flags that should have raised the auditor’s suspicions about phony sales and other attempts by MiniScribe to inflate income
- d. Normal audit procedures that could have uncovered the falsified numbers in the financial statements

†10-81 **(Control Risk Assessment—Retail Organization)** You are the internal auditor for a company that started over 40 years ago as a local retailer of major home appliances. The company has now grown to include 55 retail stores in 12 metropolitan areas. Because of rapid growth in the number of stores opened in the last three years (46), a professional management team was hired to replace the previous management team, which was composed of members of the owning family. To encourage continued growth, a sales incentive bonus plan was instituted. Under the plan, managers of individual stores receive a bonus based on inventory turnover.

A retail point-of-sale system is used to aid inventory management. Each store is a node with terminals, a local processor, and a storewide database. The nodes communicate with a central systemwide database located at corporate offices. Retail prices for all merchandise are updated once a month to the storewide database, using a master price list provided by corporate offices.

Because the desired margin is achieved for each product sold at the established master price, inventory turnover is viewed as the critical determinant of profitability for each store. Accordingly, sales volume, by product class, is reported weekly to corporate offices. Revenue is also reported weekly, but only in the aggregate. Detailed sales and inventory data, including unit revenue, product class revenue, revenue generated at discount prices, inventory movement, and inventory levels, are produced daily by each store for use by the store manager.

Selling prices are frequently discounted in widely advertised sales. For sale items, sales clerks in each store must override the master price and input the advertised price. Sales at wholesale prices, such as contractor sales, are prohibited by company policy. Damaged goods can be sold at any time at heavily discounted prices at the discretion of the store manager, who assesses damage and sets the sale price.

Over a two-year period, a store manager inflated unit sales by the following acts:

1. Fictitious credit sales were recorded in the last month of the year, with subsequent return of the goods recorded in the first month of the new year. No goods actually changed hands.
2. Undamaged goods were declared to be damaged and sold at prices significantly less than master prices.
3. Sales were completed at wholesale prices.
4. "Sale" priced merchandise was frequently sold at prices above its advertised sale price.

Acting alone, the store manager also sold selected merchandise for cash with no record made of the sale. Although a register receipt is required for customer pickup, the store manager verbally instructed the warehouse to load the merchandise without a receipt.

Required

- a. Identify six control weaknesses or management deficiencies that permitted the fraud.
- b. Identify four indicators that may have signaled the presence of the fraud.
- c. Identify four controls needed to detect the fraud.
- d. Describe the responsibilities of the internal auditing department in the situation just described.



LO 10

10-82 Refer to the ACL Case 2, "Accounts Receivable," in the ACL appendix at the end of the book. This case requires the use of ACL to perform certain audit functions on accounts receivable files.

End Notes

1. Examples of such guidance are: *SEC Staff Accounting Bulletin 101: Codification of Staff Accounting Bulletins*, Topic 13: Revenue Recognition; FASB Concepts Statement No. 5; *Audit Issues in Revenue Recognition*, AICPA, 1999; and AICPA Audit Guide, *Auditing Revenue in Certain Industries*, June 1, 2001.
2. FASB Concepts Statement 5 *Recognition and Measurement in Financial Statements of Business Enterprises*, paragraph 83.
3. The *SEC Staff Accounting Bulletin 101: Codification of Staff Accounting Bulletins*, Topic 13: Revenue Recognition provides several examples of the application of these criteria.

Appendix

A Regression Analysis

Regression analysis is a statistical technique that can provide information to help (1) determine what relationship exists between the dependent and independent variables, and (2) determine whether a “significant difference” has occurred.

A *simple regression model* includes just one independent variable. A *multiple regression model* includes two or more independent variables. Regression analysis can be used for time-series analysis or cross-sectional analysis. *Time-series regression analysis* is used for predicting a dependent variable based upon the historical relationship between that variable and one or more other financial or nonfinancial independent variables. A *simple time-series regression application* is the prediction of the current-year sales by month based on a two- or three-year history of the monthly relationship of sales to cost of sales. Predicted sales are then compared with recorded sales, and any significant differences can be identified. If the auditor does not have adequate evidence to explain the significant differences, additional evidence is needed. A *multiple time-series application* is the prediction of the dependent variable based on a number of independent variables, such as predicting office overhead expense for the current year based on square feet of office space, the age of the building, the number of office employees, and the number of clients served during the previous ten years. At least ten periods or data points are needed for a reliable regression model.

Cross-sectional regression analysis is used for predicting an amount, such as an account balance, based on independently predicting variables from the same period: data from other firms, the industry, or across different units of the client’s business, such as sales branches or inventory locations. For example, auditors cannot economically observe inventory at each location of a client that has 600 retail outlets. Regression analysis can be

used to identify locations that seem out of line with the other stores. Inventory amounts at each store may be predicted based on the sales, floor space, and price-level index at each location. The auditor may choose to observe the inventory at those stores that appear to be out of line or perform additional alternative procedures. For example, the client has 12 stores—6 mega stores with 2,200 square feet and 6 mini-stores with 800 square feet. Using a simple cross-section regression analysis, the auditor can identify any store with an unexpected amount of sales or inventory:

Store	Sq Ft	SALES			INVENTORY		
		Per Books	Predicted	Residuals	Per Books	Predicted	Residuals
1	2200	7,500,390	7,661,021	-160,631	625,033	638,418	-13,386
2	800	3,546,988	3,411,631	135,357	295,582	284,303	11,280
3	800	3,065,921	3,411,631	-345,710	255,493	284,303	-28,809
4	2200	6,950,423	7,661,021	-710,598	579,202	638,418	-59,216
5	2200	8,153,788	7,661,021	492,767	679,482	638,418	41,064
6	800	3,333,333	3,411,631	-78,298	277,778	284,303	-6,525
7	2200	7,555,555	7,661,021	-105,466	689,424	638,418	-8,789
8	800	3,065,921	3,411,631	-345,710	255,493	284,303	-28,809
9	800	2,956,455	3,411,631	-455,176	246,371	284,303	-37,931
10	2200	8,305,578	7,661,021	644,557	692,132	638,418	53,713
11	2200	7,500,390	7,661,021	-160,631	625,033	638,418	-13,386
12	800	4,501,169	3,411,631	1,089,538	375,097	284,303	90,795

Notice that store 12 has unexpectedly large sales and inventory in comparison with the predicted amounts. This could be an indicator of potential fraud or it may just be an unusual store. The auditor should investigate to find out which it is.

Computer assistance is readily available through most spreadsheets and some graphics computer programs to perform simple regression analysis. Special statistical programs, such as *Statistical Programs for the Social Sciences (SPSS)* or *ANSWERS* (sold by Financial Audit Systems) may be needed for multiple regression models. Many public accounting firms have developed their own regression software. Deloitte, for example, has a program called *Statistical Techniques for Analytical Review (STAR)*. It is a sophisticated regression program that can be used for time-series or cross-sectional analysis, single or multiple independent variables. It integrates audit decisions about materiality, reliability, and other audit objectives with regression analysis and certain other statistical techniques. ACL has regression capabilities. Examples of regression analysis applications include predicting:

- Monthly sales based on cost of sales and selling expense
- Airline and truck company fuel expense based on miles driven and fuel cost per gallon
- Maintenance expense based on production levels
- Inventory at each branch location of a retail company based on store sales, store square footage, regional economic data, and type of store location

Case Notes

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