PART

4

AUDITING THE TRANSACTION CYCLES

14 Auditing the Revenue Cycle

WHAT IS THE MOST FREQUENT CAUSE OF FINANCIAL STATEMENT RESTATEMENTS?

In October 2002 the U.S. General Accounting Office released its report on *Financial Statement Restatement,* and revenue recognition problems topped the list of financial statement improprieties. Here is a sample of just how significant revenue recognition problems were:

- Thirty-eight percent of restatements between 1997 and June 30, 2002 involved revenue recognition issues.
- Revenue recognition issues were the primary reason for restatements in each year.
- Approximately 50 percent of the SEC's enforcement cases involved revenue recognition issues.
- Eight out of the top ten losses in market capitalization in 2000 related to improper revenue recognition. The top three lost nearly $20 billion in market value in just three days after reporting restatements of revenue recognition.

Auditors should be alert for the following types of problems.

Consignment Sales. Sale arrangements that have the characteristics of a consignment sale include giving the buyer a lengthy right of return, substantial payment is made upon the resale of the product, and sellers are required to repurchase inventory at a specified price, or the buyer does not assume risks of ownership due to future pricing concessions. For example, if a manufacturer promises a wholesaler future price concession based upon holding and financing costs for the length of time between purchase and sale, the sale should be accounted for as a consignment sale and revenue should be deferred.

Refund Rights. When rights of return exist, or are likely to be accepted, a reasonable estimate of refunds should be made before revenue is recognized. In determining the amount of the estimated refunds, management should consider competition, obsolescence, and the length of time over which the product can be returned.

Bill and Hold Transactions. These are transactions where a company bills customers without shipping goods (see the discussion of the Sunbeam Corporation in the introduction to Chapter 6). For example, assume that a manufacturer leases a portion of its facility to a customer and records revenue on sales to this customer when products are delivered to the customer's portion of the facility. Revenue recognition is appropriate only if the manufacturer has no rights or risk associated with the product once they were delivered to the customer's space.

Gross Sales. Top-line revenues may be very important. Companies may award bonuses based on total revenues, and companies have been valued based on multiples

of revenues. Consider the hotel chain that manages properties that it does not own. It should not record revenues from managed properties in a similar fashion to owned properties and then record related expenses of property management. Rather, it should only record its management fee as revenues.

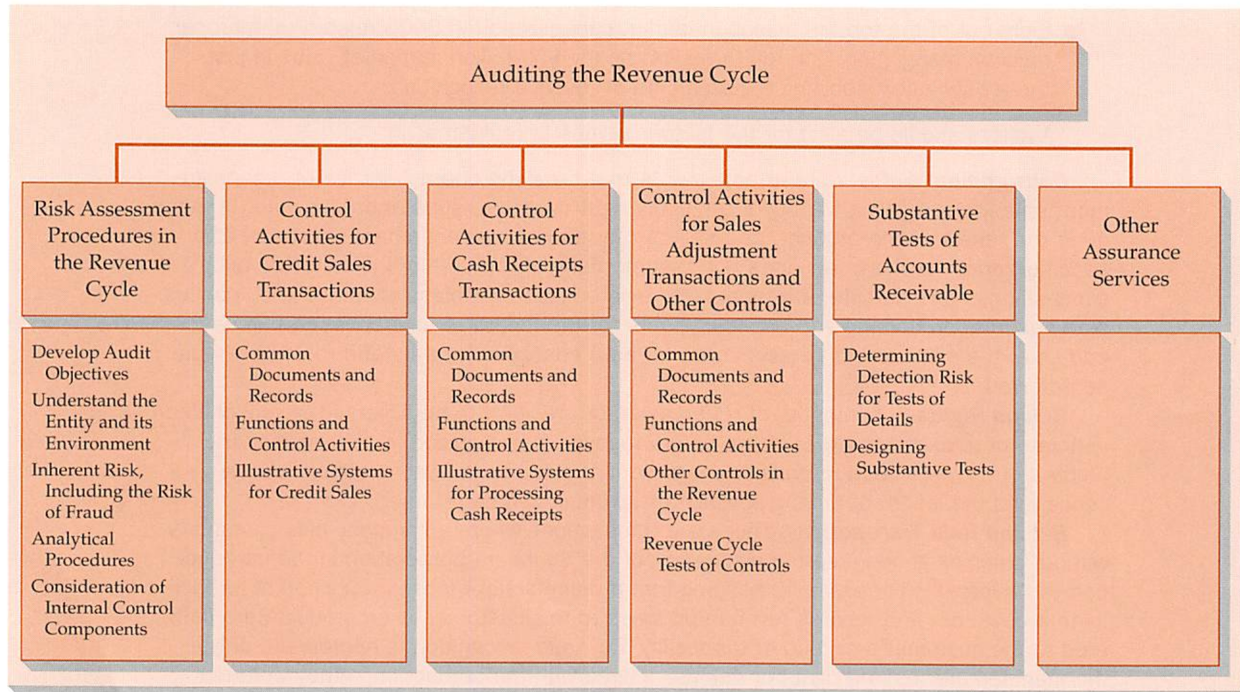
Round-Trip Transactions. Auditors should be alert to situations such as the fraud at Homestore, Inc. Homestore paid inflated sums to various vendors for services or products, the vendors used these funds to buy advertising from two media companies, and the media companies bought advertising from Homestore. Homestore then improperly recorded the money it received from the sale of the advertising as revenue in its financial statements. The SEC viewed these transactions as a circular flow of money where Homestore recognized its own cash as revenue.

Each of these situations represents important risks of material misstatement in the financial statements. Read on in the chapter to better understand how the auditor assesses the risk of such material misstatements and how the auditor should address revenue recognition when considering the risk of fraud.

Source: D. Paul Regan, "Revenue Recognition: Now, Later or Never?," *California CPA,* September 2003.

[PREVIEW OF CHAPTER 14]

Chapter 14 focuses on specific aspects of auditing the revenue cycle. It begins with a discussion of planning activities related to the revenue cycle. It then focuses on specific controls commonly seen in the revenue cycle as well as specific substantive tests related to the revenue cycle. The following diagram provides an overview of the chapter organization and content.



Chapter 14 focuses on the following aspects of the auditor's decision process associated with auditing the revenue cycle.

focus on audit decisions

After studying this chapter you should understand the factors that influence the following audit decisions.

D1. What is the nature of the revenue cycle, and how are specific audit objectives developed for the revenue cycle?

D2. How does understanding the entity and its environment affect audit planning decisions in the revenue cycle?

D3. What are the important inherent risks in the revenue cycle?

D4. How does the auditor determine analytical procedures that would be effective in identifying potential misstatements in the revenue cycle?

D5. What are the relevant aspects of internal control components for the revenue cycle?

D6. What should be considered in evaluating control activities for credit sales transactions?

D7. What should be considered in evaluating control activities for cash receipts?

D8. What should be considered in evaluating control activities for sales adjustment transactions?

D9. What are the relevant aspects of tests of controls when the auditor plans to assess control risk below the maximum for the revenue cycle?

D10. What are the factors involved in determining an acceptable level of tests of details risk for accounts receivable assertions?

D11. How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for accounts receivable?

D12. How are confirmation procedures used in auditing accounts receivable?

D13. How does the auditor use the knowledge obtained during the audit of the revenue cycle to support other assurance services?

RISK ASSESSMENT PROCEDURES IN THE REVENUE CYCLE

Audit Decision 1

■ What is the nature of the revenue cycle, and how are specific audit objectives developed for the revenue cycle?

An entity's **revenue cycle** consists of activities related to the exchange of goods and services with customers and to the collection of the revenue in cash. For a merchandising company, the classes of transactions in the revenue cycle include (1) **credit sales** (sales made on accounts), (2) **cash receipts** (collections on accounts and cash sales), and (3) **sales adjustments** (discounts, sales returns and allowances, and uncollectable accounts provisions and write-offs). These transactions affect the accounts depicted in Figure 14-1. Three of these accounts—cost of goods sold, inventory, and cash—are also affected by transaction classes in other cycles. Coverage of the audit of these accounts is deferred to later chapters.

DEVELOP AUDIT OBJECTIVES

The audit objectives for the revenue cycle relate to obtaining sufficient competent evidence about each significant financial statement assertion that pertains to revenue cycle transactions and balances. Recall from Chapter 6 (see Figure 6-2) that specific audit objectives are derived from five categories of management's assertions. Specific audit objectives are developed for transactions, balances, and disclosures related to a specific transaction cycle. These audit objectives for the rev-

Figure 14-1 ■ The Revenue Cycle

Revenue Transaction	Debit	Credit
Credit Sale	Accounts Receivable	Sales
	Cost of Goods Sold	Inventory
Cash Receipt	Cash	Accounts Receivable
	Sales Discounts	
Sales Returns and Allowances	Sales Returns and Allowances	Accounts Receivable
Provision for Bad Debts	Bad Debt Expense	Allowance for Doubtful Accounts
Write-off of Bad Debts	Allowance for Doubtful Accounts	Accounts Receivable

enue cycle are shown in Figure 14-2. Specific revenue cycle transactions are keyed to numbered audit objectives (C1 … C4, EO1 … EO4, and so on) that are used throughout Chapter 14.

UNDERSTAND THE ENTITY AND ITS ENVIRONMENT

Audit Decision 2

■ How does understanding the entity and its environment affect audit planning decisions in the revenue cycle?

Chapter 7 explained how the auditor uses an understanding of the entity and its environment to develop a knowledgeable perspective about the entity and its financial statements and to assess the risk of material misstatement. Understanding the entity and its environment assists the auditor in:

- Developing an expectation of total revenues by understanding the client's capacity, marketplace, and clients.
- Developing an expectation of gross margin by understanding the client's market share and competitive advantage in the marketplace.
- Developing an expectation of net receivables based on the average collection period for the client and industry.

In addition, the process of generating revenues drives many expenses (e.g., cost of goods sold or selling expenses). Thus, understanding the revenue cycle assists in developing expectations of an entity's expenditures associated with other transaction cycles and assessing the risk that unaudited earnings contain material misstatements.

Figure 14-3 illustrates the importance of understanding the revenue cycle for five different entities, which are discussed throughout Part 4 of the text. These include a manufacturer of construction machinery and equipment (SIC 3531), a manufacturer of electronic computers (SIC 3571), a retail grocer (SIC 5411), a hotel (SIC 7011), and a local school district (SIC 8211). These examples define a wide spectrum of underlying business practices and an equally wide spectrum of risk for the auditor. The auditor would normally obtain this understanding though previous experience with the entity, obtaining information from trade associations, reading business periodicals and newspapers, and consulting with publications of industry information such as Robert Morris Associates or Value Line.

Figure 14-2 ■ Specific Audit Objectives for the Revenue Cycle

Specific Audit Objectives
Transaction Objectives
Occurrence. Recorded sales transactions represent goods shipped or services provided during the period **(EO1).**
Recorded cash receipt transactions represent cash received during the period **(EO2).**
Recorded sales adjustment transactions during the period represent authorized discounts, returns and allowances, and uncollectable accounts **(E03).**
Completeness. All sales **(C1),** cash receipts **(C2),** and sales adjustments **(C3)** made during the period were recorded.
Accuracy. All sales **(VA1),** cash receipts **(VA2),** and sales adjustments **(VA3)** are accurately valued using GAAP and correctly journalized, summarized and posted.
Cutoff. All sales **(EO1 or C1),** cash receipts **(EO2 or C2),** and sales adjustments **(EO3 or C3)** have been recorded in the correct accounting period.
Classification. All sales **(PD1),** cash receipts **(PD2),** and sales adjustments **(PD3)** have been recorded in the proper accounts.
Balance Objectives
Existence. Accounts receivable representing amounts owed by customers exists at the balance sheet date **(EO4).**
Completeness. Accounts receivable include all claims on customers at the balance sheet date **(C4).**
Rights and Obligations. Accounts receivable at the balance sheet date represent legal claims of the entity on customers for payment **(RO1).**
Valuation and Allocation. Accounts receivable represents gross claims on customers at the balance sheet date and agrees with the sum of the accounts receivable subsidiary ledger **(VA4).**
The allowance for uncollectable accounts represents a reasonable estimate of the difference between gross receivables and their net realizable value **(VA5).**
Disclosure Objectives
Occurrence and Rights and Obligations. Disclosed revenue cycle events and transactions have occurred and pertain to the entity **(PD4).**
Completeness. All revenue cycle disclosures that should have been included in the financial statements have been included **(PD5).**
Classification and Understandability. Revenue cycle information is appropriately presented and described and information in disclosures is clearly expressed **(PD6).**
Accuracy and Valuation. Revenue cycle information is disclosed accurately and at appropriate amounts **(PD7).**

Students should note that the manufacturers have the most significant issues with revenue recognition. The manufacturer of construction machinery and equipment may provide liberal terms of sale and may even finance the sale. The computer manufacturer may bundle products that have various conditions that must be met before revenue can be recognized. Revenue recognition is more straightforward for the retail grocer, hotel, and the school district. These last three industries also have very short collection periods and low credit risks.

Figure 14-3 ■ Understanding an Entity's Revenue Cycle

Example Industry Traits	Developing a Knowledgeable Perspective about the Entity's Financial Statements (Industry Median)	Assessing the Risk of Material Misstatement
Mfg. of Construction Machinery and Equipment • Sales dependent on level of construction spending • Companies may have a financing arm to finance sales of expensive equipment.	Sales to Total Assets: 2.0 Sales to Net Fixed Assets: 10.0 Median Gross Margin: 28.7% Median Collection Period. 45 days	• Concerns about terms of sale and revenue recognition. • Moderate collection risk • Loan loss reserve is important estimate in financing subsidiaries
Computer Mfg. • Sells products ranging from large computers and network servers to personal computers. • Consulting services may represent a significant component of revenues. • Margins depend on competing technologies.	Sales to Total Assets: 2.3 Sales to Net Fixed Assets: 25.7 Median Gross Margin: 34.4% Median Collection Period: 52 days	• Significant revenue recognition issues associated with bundled products. • Cash collection may precede revenue recognition, resulting in unearned revenues. • Competitive environment significantly affects selling prices and gross margins. • Normal concerns about collection risk.
Retail Grocer • Numerous products where product differentiation is difficult. • Companies are improving margins by leasing space to banks and coffee companies. • Intense competition from club stores and supercenters.	Sales to Total Assets: 5.0 Sales to Net Fixed Assets: 13.3 Median Gross Margin: 24.7% Median Collection Period: 2 days	• Do sales volumes cover fixed costs? • Gross margins related to product mix and space utilization.
Hotel • Importance of brand development. • Generates revenues from hotel occupancy and services (food and conferences), franchise fees, and property management.	Sales to Total Assets: 0.6 Sales to Net Fixed Assets: 0.7 Median Gross Margin: n/a Median Collection Period: 5 days	• Revenue recognition for property management in the hotel industry has changed as a result of EITF 97-2.[a] • Sales volumes, prices, and occupancy rates. • Major hotel companies that enter into management agreements experience a higher degree of collection risk.
Local School District • Tax levies are the major source of revenues. • Taxes may be distributed on headcount and student performance on exams.	Sales to Total Assets: 0.7 Sales to Net Fixed Assets: 1.2 Median Gross Margin: n/a Median Collection Period: 7 days	• What is the quality of the information system that reports student headcount? • Low collection risk. • Business risk associated with high fixed cost and enrollment declines.

[a] 1 EITF 97-2, "Application of FASB Statement No. 94 and APB Opinion No. 16 to Physician Practice Management Entities and Certain Other Entities with Contractual Management Agreements."

Audit Decision 3

■ What are the important inherent risks in the revenue cycle?

INHERENT RISK, INCLUDING THE RISK OF FRAUD

In assessing inherent risk for revenue cycle assertions, the auditor should consider pervasive factors that may affect assertions in several cycles, including the revenue cycle, as well as factors that may pertain only to specific assertions in the revenue cycle. These include factors that provide the incentive for management to misstate revenue cycle assertions and fraudulent financial reporting, such as:

- Pressures to overstate revenues in order to report achieving announced revenue or profitability targets that were not achieved in reality owing to such factors as global, national, or regional economic conditions; the impact of technological developments on the entity's competitiveness; or poor management. Devices employed to overstate revenues are discussed in the opening vignette to this chapter.
- Pressures to overstate cash and gross receivables or understate the allowance for doubtful accounts in order to report a higher level of working capital in the face of the need to meet debt covenants.

Other factors that contribute to misstatements in the revenue cycle include the following:

- The volume of sales, cash receipts, and sales adjustment transactions is often high, resulting in numerous opportunities for errors to occur.

revenue recognition and cooking the books

Revenue is a critical driver of earnings and cash flows. If companies are trying to report good figures to Wall Street, they often must report sales growth. But what happens when a company does not achieve targeted sales growth? Most companies have the integrity to ensure that reported revenues are materially correct. However, this is not always the case. Following is a brief summary of five companies that *cooked the books*. Overstating revenues was a key part of the scheme to inflate revenues and earnings. Auditors are expected to uncover these types of financial statement problems.

As an aside, the chief executive officers of these companies were involved in the fraud, were convicted or pleaded guilty for their involvement in the accounting fraud, and spent time in jail.

COMPANY	WHAT THE COMPANY DID
Underwriters Financial Group	Reported nonexistent revenues to make a losing company look like a profit maker.
Donnkenny	Concocted false invoices and revenues to meet earnings goals.
California Micro Devices	Led staff to record sales for products not shipped or even manufactured.
Home Theater Products Int'l.	Invented customers and sales to show profits when red ink was the reality
FNN	Spun companies controlled by FNN into an elaborate plot that inflated FNN's sales.

Source: "Lies, Dammed Lies, and Managed Earnings," *Fortune*, August 2, 1999, p. 75.

- The timing and amount of revenue to be recognized may be contentious owing to factors such as ambiguous accounting standards, the need to make estimates, the complexity of the calculations involved, and purchasers' rights of return.
- When receivables are factored with recourse, the correct classification of the transaction, as a sale or a borrowing, may be contentious.
- Receivables may be misclassified as current or noncurrent owing to difficulties in estimating the likelihood of collection within the next year or the source of events on which collection is contingent.
- Cash receipt transactions generate liquid assets that are particularly susceptible to misappropriation.
- Sales adjustment transactions may be used to conceal thefts of cash received from customers by overstating discounts, recording fictitious sales returns, or writing off customers' balances as uncollectible.

Because of the variety and potential magnitude of the misstatements enumerated above that can occur in the absence of effective controls, the auditor must always give careful consideration to inherent risks in the revenue cycle. Risks associated with revenue recognition are such that the auditor should consider the existence and occurrence assertion to be a significant inherent risk. In many cases, management adopts extensive internal controls to address many of these issues attributable to their own risk assessment procedures.

ANALYTICAL PROCEDURES

Audit Decision 4

- How does the auditor determine analytical procedures that would be effective in identifying potential misstatements in the revenue cycle?

Analytical procedures are cost effective, and they are often effective in identifying potential misstatements in the financial statements. The most effective analytical procedures use the auditor's knowledge of the business and industry. Some example analytical procedures that may apply to the revenue cycle are presented in Figure 14-4.

The first step in performing analytical procedures is obtaining an understanding of total revenues given (1) the client's capacity and (2) the client's marketplace for those products. The auditor should understand the **entity's capacity**—the maximum volume of sales that it could generate if it fully utilized its facilities and employees to manufacture and deliver products and services. Auditors should be sensitive to the volume of sales that an entity records given its maximum capacity, the number of shifts that an entity operates, and seasonal variations in the industry. It is generally more effective to evaluate total revenues against a measure of business activity than comparing current revenues with prior-year revenues. Hence, the auditor will often tailor analytical procedures to the client's industry that compare revenues with measures of the process that produces revenues. For example, the auditor might evaluate the following trends:

- Revenue per number of manufacturing employee labor hours, for a labor-intensive manufacturing process.
- Revenue to plant assets in a capital-intensive manufacturing process.
- Revenue per square foot of retail space for a grocer.
- Revenue compared to occupancy rates for industries such as hotels or airlines.
- Tax revenue per student for a school district.

Figure 14-4 ■ Analytical Procedures Commonly Used to Audit the Revenue Cycle

Ratio	Formula	Audit Significance
Sales to Capacity	Net Sales ÷ Nonfinancial Measure of Capacity	Helpful in assessing the reasonableness of total revenues.
Market Share	Client's Net Sales ÷ Net Sales of Industry	Helpful in assessing the reasonableness of both total revenues and gross margins. Larger market share is often associated with larger gross margins.
Sales to Total Assets	Sales ÷ Average Total Assets	This ratio is useful for manufacturing and other asset-based companies. Describes the relationship between assets and sales revenues.
Accounts Receivable Growth to Sales Growth	((Accounts Receivable $_t$ ÷ Accounts Receivable $_{t-1}$) − 1) ÷ ((Sales$_t$ ÷ Sales $_{t-1}$) − 1)	Ratios larger than 1.0 indicate that receivables are growing faster than sales. Large ratios may indicate possible collection problems.
Accounts Receivable Turn Days	Avg. Accounts Receivable ÷ Sales × 365	Useful in comparing with industry averages. Longer collection periods may indicate collection problems. Prior experience and current sales volumes may be useful in estimating current net receivables.
Uncollectable Accounts Expense to Net Credit Sales	Uncollectable Accounts Expense ÷ Net Sales	Useful in evaluating the reasonableness of uncollectable accounts expense. Smaller ratios may indicate an inadequate provision for uncollectable accounts.
Uncollectable Accounts Expense to Accounts Receivable Write-offs	Uncollectable Accounts Expense $_{t-1}$ ÷ Actual Accounts Receivable Write-offs$_t$	Useful in evaluating the reasonableness of prior period's uncollectable accounts expense. Smaller ratios may indicate an inadequate estimation process.
New Product Revenues to Total Revenues	Revenues from New Products Introduced During the Year ÷ Total Revenues	Companies with a high proportion of revenues from new products may earn a premium gross margin due to ability to innovate.

When evaluating these figures, the auditor must also be sensitive to trends in the marketplace for the client's products. The auditor must be able to assess the reasonableness of revenue increases for a manufacturer of constructions equipment when road and government building construction is declining, or the reasonableness of occupancy rates and room prices for a hotel chain when new competitive properties have entered key markets.

Finally, it is important for the auditor to evaluate the client's accounts receivable turn days, or average collection period, and be able to compare the collection period with industry norms. Increases in the client's collection period are indicators that receivables are growing faster than sales volumes, which consumes operating cash flows and may lead to liquidity problems. It is particularly important for growth companies to monitor the entity's collection period because any growth in sales is usually accompanied by receivable growth that consumes oper-

ating cash. If receivables are growing faster than sales, it may be an indication that the company is accomplishing sales growth by taking on increased credit risk.

Other analytical procedures that the auditor might assess in the revenue cycle could include:

- Sales turnover, a ratio of sales to average total assets.
- Trends in gross margins compared with trends in market share.
- Estimates of accounts receivable given knowledge of the company's sales volumes, prices, and historical collection period.
- Comparison of accounts receivables to the receivables estimated in the company's cash budgets.
- Uncollectable accounts expense to net credit sales.
- Uncollectable accounts expense to actual uncollectable accounts written off.

CONSIDERATION OF INTERNAL CONTROL COMPONENTS

Audit Decision 5

- What are the relevant aspects of internal control components for the revenue cycle?

In this section, we consider the applicability of four of the five internal control components to the revenue cycle—the control environment, risk assessment, information and communication (which includes the accounting system), and monitoring. An understanding of these components is required under either a primarily substantive audit strategy or a lower assessed level of control risk approach. The applicability of the fifth component, control activities, is discussed later in the chapter in separate sections for each of the three major transaction classes in the revenue cycle.

Recall from Chapter 10 that the auditor should obtain an understanding of the sales cycle that is sufficient to plan the audit. That is, the auditor needs to have a sufficient understanding to be able to (1) identify the types of potential misstatements, (2) consider factors that affect the risk of material misstatement, and (3) design substantive tests.

Control Environment

The control environment consists of several factors that may mitigate several of the inherent risks related to the revenue cycle discussed earlier in this chapter. In addition, these factors may enhance or negate the effectiveness of other internal control components in controlling the risk of misstatements in revenue cycle assertions.

A key control environment factor in reducing the risk of fraudulent financial reporting through the overstatement of revenues and receivables is management's adoption of, and adherence to, high standards of integrity and ethical values. Related aspects include eliminating incentives to dishonest reporting (e.g., undue emphasis on meeting unrealistic sales or profit targets) and the supporting activities of an effective board of directors and audit committee.

Several of the identified inherent risks related to contentious accounting issues, complex calculations, and accounting estimates that may pertain to revenue cycle assertions may be controlled if management has made the appropriate commitment to competence on the part of the chief financial officer and accounting personnel. In obtaining an understanding of this factor, in addition to current inquiries and observations of personnel, the auditor may consider prior experience with the client and may review personnel files.

Also relevant to mitigating several of the inherent risks discussed earlier is a characteristic of management's philosophy and operating style, which may be described as its attitudes and actions toward financial reporting. This characteristic includes management's conservative (or aggressive) selection from alternative accounting principles, and its conscientiousness and conservatism (or aggressiveness) in developing accounting estimates such as the allowances for uncollectable accounts and sales returns.

A number of special human resource policies and practices are often adopted for employees who handle cash receipts because of the susceptibility of cash to misappropriation. For example, many entities bond employees who handle cash. **Bonding** involves the purchase of a fidelity insurance policy against losses from the theft of cash and similar defalcations perpetrated by dishonest employees. Before the insurer issues a policy or adds an employee to an existing policy, it generally investigates the individual's honesty and integrity in previous positions. Bonding contributes to the control environment over cash receipts in two ways: (1) it may prevent the hiring or continued employment of dishonest individuals, and (2) it serves as a deterrent to dishonesty because employees know that the insurance company may vigorously investigate and prosecute any dishonest act. Additional practices include having employees who handle cash take mandatory vacations, and rotating employees' duties periodically. The thrust of these controls is to deter dishonesty by making employees aware that they may not be able to permanently conceal their misdeeds. Some embezzlements from banks and other entities, for example, have been traced to the seemingly dedicated employee who held the same job without taking a vacation for five or more years in order not to disrupt his or her routine of concealment.

Risk Assessment

Recall from Chapter 10 that management should assess business risks, inherent risks, and fraud risks and place controls to mitigate the implications of these risks. An important aspect of planning the audit involves obtaining an understanding of management's risk assessment procedures, risks identified, and management's responses in placing controls in operation. In particular, auditors should evaluate new controls associated with new product lines and new sources of revenues, management's response to new accounting standards for revenue transactions, and the impact on accounting and reporting of rapid growth in the revenue cycle and related changes in personnel.

Information and Communication (Accounting System)

Our primary concern with this component in this chapter pertains to the portion of the accounting system used in processing revenue cycle transactions and balances. An understanding of the revenue accounting system requires knowledge of how (1) sales are initiated, (2) goods and services are delivered, (3) receivables are recorded, (4) cash is received, and (5) sales adjustments are made, including the methods of data processing and the key documents and records used. Management should make appropriate provisions for documenting the processing and reporting on revenue cycle transactions and balances. This might include the chart of accounts, policy manuals, accounting and financial reporting manuals, and system flowcharts. The subsequent sections identify the key documents and records

in the accounting system and provide illustrative examples of the system and related controls.

Monitoring

This component should provide management with feedback as to whether internal control pertaining to revenue cycle transactions and balances are operating as intended. The auditor should obtain an understanding of this feedback and whether management has initiated any corrective actions based on the information received from the monitoring activities. Possibilities include information received from (1) customers concerning billing errors, (2) regulatory agencies concerning disagreements on revenue recognition policies or related internal control matters, and (3) external auditors concerning reportable conditions or material weaknesses in relevant internal controls found in prior audits.

Initial Assessments of Control Risk and Preliminary Audit Strategy

If the client has a strong control environment, an effective risk assessment process, a sound system of information and communication, and effective monitoring, then the auditor will usually proceed to identify whether effective control activities have been placed in operation. Auditors often plan to follow a lower assessed level of control risk approach when auditing the revenue cycle, because of the high volume of revenue transactions. Control activities are usually effective in these circumstances. However, if significant weaknesses are noted in the control environment, which has a pervasive impact on other aspects of internal control, the auditor might choose to plan a primarily substantive approach. The control activities that would allow the auditor to assess control risk as low are discussed next for each of the three major transaction classes in the revenue cycle.

For revenue cycle assertions for which the auditor plans to assess control risk at high or maximum, he or she should have the knowledge needed to identify types of potential misstatements that could occur, assess the risk of material misstatement, and proceed with the design of substantive tests. The audit strategy may depend on the nature of the business and industry. When a client's revenues are concentrated within a few sources (such as a public school district's concentration of revenues collected by the state or county), the auditor may rely primarily on substantive tests of details.

LEARNING CHECK

14-1 a. Describe the nature of the revenue cycle.
b. Identify the major classes of transactions in the cycle for a merchandising company, and the primary accounts that are affected by these transactions.

14-2 a. How are specific audit objectives derived for the revenue cycle?
b. State the specific audit objectives for credit sales transactions.

14-3 a. Explain how the auditor's knowledgeable expectation about the financial statements might be different for a computer manufacturer than for a hotel.

b. Explain why the auditor's assessment of the risk of material misstatement might be different for a computer manufacturer than for a hotel.

14-4 State two inherent risk factors that might motivate management to deliberately misstate revenues and receivables and two factors that might cause unintentional misstatements.

14-5 a. State an analytical procedure that an auditor might use to estimate total revenues for a household appliance manufacturer and for an airline.

b. State an analytical procedure that an auditor might use to estimate gross margin.

c. State two analytical procedures that an auditor might use to estimate net receivables and the allowance for doubtful accounts.

14-6 Identify elements of the control environment that are relevant to initiating and recording sales.

[KEY TERMS

Bonding, p. 637
Cash receipts, p. 629
Credit sales, p. 629
Entity's capacity, p. 634
Revenue cycle, p. 629
Sales adjustments, p. 629

[CONTROL ACTIVITIES FOR CREDIT SALES TRANSACTIONS]

Audit Decision 6

■ What should be considered in evaluating control activities for credit sales transactions?

Sales orders may be taken over-the-counter, or via telephone, mail order, traveling sales representatives, fax, or electronic data interchange. The goods may be picked up by the customer or shipped by the seller. Sales transactions are usually recorded using computer systems that may process transactions in either a real-time or batch processing mode. Control activities over sales transactions should be tailored to these varying circumstances.

Virtually every company that requires an audit has a computerized accounting system. Hence, this text focuses on how management would implement control activities using programmed control procedures. Recall from Chapters 10 and 11 that there are two types of computer controls:

- General controls that relate to the computer environment and have a pervasive effect on computer applications.
- Application controls that relate to the individual computerized accounting applications, such as the expenditure cycle.

Recall that if general controls are ineffective, reliance can rarely be placed on the application controls. For purposes of discussion, this chapter will assume that general controls are effective, as are the followup procedures that the entity uses to investigate issues that are triggered by application controls.

When evaluating internal controls over credit sales, it is important to understand the common documents, records, and the controls associated with the credit sale functions. The following discussion outlines the necessary controls that are relevant to the audit objectives identified at the outset of the chapter.

COMMON DOCUMENTS AND RECORDS

The numerous documents and records used by large companies in processing credit sales transactions often include the following:

- **Customer order.** Request for merchandise by a customer received directly from the customer or through a salesperson. May be a form furnished by the seller or the buyer's purchase order form.
- **Sales order.** Form showing the description, quantity, and other data pertaining to a customer order. It serves as the basis for initiating the transaction and internal processing of the customer order by the seller.
- **Shipping document.** Form used to show the details and date of each shipment. It may be in the form of a **bill of lading,** which serves as a formal acknowledgment of the receipt of goods for delivery by a freight carrier. Other shipping documents may include a **packing slip** with details on the items included in a shipment.
- **Sales invoice.** Form stating the particulars of a sale, including the amount owed, terms, and date of sale. It is used to bill customers, and it provides the basis for recording the sale.
- **Authorized price list.** Listing or computer master file containing authorized prices for goods offered for sale.
- **Sales transactions file.** Computer file of completed sales transactions. Used to print the sales invoices and sales journal, and to update the accounts receivable, inventory, and general ledger master files.
- **Sales journal.** Journal listing completed sales transactions.
- **Customer master file.** Contains the customer's shipping and billing information, and the customer's credit limit.
- **Accounts receivable master file.** Contains information on transactions with, and the balance due from, each customer. Serves as the basis for the **accounts receivable subsidiary ledger.**
- **Customer monthly statement.** Report sent to each customer showing the beginning balance, transactions during the month, and the ending balance.

FUNCTIONS AND CONTROL ACTIVITIES

The processing of revenue transactions involves the following revenue functions:

- **Authorizing sales.** The request by an entity for a sales transaction with another entity, including:
  - Accepting customer orders
  - Approving credit
- **Delivery of goods and services.** The physical shipment or delivery of a good or service, including:
  - Filling sales orders
  - Shipping sales orders
- **Recording sales.** The formal recognition of revenue by an entity. Each of these major functions should be assigned to a different individual or department, providing for adequate segregation of duties. The functions, applicable control activities, and relevant assertions and specific audit objectives are explained in the following sections. Figure 14-5 summarizes examples of programmed control procedures related to each of these functions.

Figure 14-5 ■ Control Risk Considerations—Credit Sale Transactions

Function	Potential Misstatement	Computer Control[a] *(Manual Controls in Italics)*	C1	EO1	VA1 VA5	PD1
Initiating Credit Sales	Sales may be made to unauthorized customers.	Only the credit department can add new customers to the customer master file.		P		
		The computer matches customer on sales order with customer master file.		P		
	Sales may be made without credit approval.	The computer matches amount of sales order with credit authorization on customer master file.			P	
Delivering Goods and Services	Goods may be released from warehouse for unauthorized orders.	Computer matches all goods pulled from inventory (perpetual inventory) to approved sales order.		P		
	Goods shipped may not agree with goods ordered.	Independent check by shipping clerk of agreement of goods received from warehouse with approved sales order.		D		
	Unauthorized shipments may be made.	Computer matches prenumbered shipping documents with approved sales order for each shipment.		D		
	Ordered goods may not be shipped.	Computer prints a report of all unfilled sales orders.	D			
Recording Sales	Some shipments may not be billed.	Computer prints a report of all goods shipped but not billed.	D			
		Accounting for all prenumbered sales invoices.	D			
		Comparison of control totals for shipping documents with corresponding totals for sales invoices.	D			
	Billings may be made for fictitious transactions, or duplicate billings may be made.	Sales are recorded only on the basis of sales invoices.		P		
		Computer matches sales invoice information with underlying shipping information.		D		
		Comparison of control totals for shipping documents with corresponding totals for sales invoices.	D	D		
	Sales invoices may be recorded in the incorrect accounting period.	Comparison of invoice date with the accounting period when goods were shipped.	D	D		
	Sales invoices may have incorrect prices.	Computer matches sales prices with authorized price list and sales order.			D	
	Invoices may not be journalized or posted to customer accounts.	Computer checks run-to-run total of beginning accounts receivable balances, plus sales transactions with the sum of ending accounts receivable balances.			D	
	Invoices may be posted to wrong customer accounts.	Computer matches customer number on sales invoice with customer number on sales order.				D
	Errors may be made in recording sales invoices.	*Mailing of monthly statements to customers with independent followup on customer complaints.*	D	D	D	D
		Management Control				
All Functions	Sales may be made to unauthorized customers or sales may not be collected.	An appropriate level of management reviews sales and collections on a regular basis.	D	D	D	D

[a] All computer controls assume that exceptions are either printed on an exception report for followup or an error message appears during input and the transaction cannot be processed without correction and acceptance.

P = potential control to prevent misstatement or unauthorized use of resources.

D = potential control to detect misstatement or unauthorized use of resources.

Authorizing Sales

Accepting Customer Orders

Sales orders from customers should be accepted only in accordance with management's authorized criteria. The criteria generally provide for specific approval of the order in the sales order department using a computer terminal to determine that the customer exists in a customer master file with approved credit limits. If the customer is not listed, approval by a credit department supervisor is usually required.

In many companies, the next step is preparing a prenumbered sales order form. The prenumbered sales order form permits following each transaction from initiation to delivery of goods or service, to recording the sale, to receipt of final consideration. The sales order represents the start of the transaction trail of documentary evidence. Information on open (unfilled) and filled sales orders is usually maintained in appropriate computer files.

Approving Credit

The process of approving credit is particularly important in the context of minimizing credit risk and ensuring that goods shipped are paid for on a timely basis. Well-managed entities take actions that ensure strong operating cash flows. The credit department gives credit approval in accordance with management's credit policies and authorized credit limits for each customer. Usually the computer can be programmed to compare a customer's outstanding receivable balance, plus the anticipated sale, with the customer's credit limit in the approved customer master file. Segregating responsibility for initiating a sale and approving credit prevents sales personnel from subjecting the company to undue credit risks to boost sales.

A credit check should be made for all new customers, which may include obtaining a credit report from a rating agency such as Dun & Bradstreet. Approval or nonapproval of credit is indicated by an authorized credit employee following prescribed procedures in having the new customer and credit information added to the accounts receivable master file.

Controls over approving credit are designed to reduce the risk of initially recording an individual revenue transaction at an amount in excess of the amount of cash expected to be realized from the transaction. Thus, they relate to the valuation or allocation assertion for sales transactions (VA1). Of course, the expectations of realizability for some of these amounts will change over time, resulting in the need for an allowance for uncollectable accounts. Controls over approving credit will enable management to make a more reliable estimate of the size of the allowance needed. Thus, these controls also relate to the valuation or allocation assertion for the allowance for uncollectable accounts (VA5).

Delivery of Goods or Services

Delivery of goods or services is the economic event that represents change in title and establishes the right to a receivable.

Filling Sales Orders

Company policy generally prohibits the release of any goods from the warehouse without an approved sales order. Furthermore, the computer may be programmed to match items taken from the perpetual inventory with items on an approved sales order. This control procedure is designed to prevent the unauthorized removal of

items from inventory. The warehouse may receive an electronic copy of the approved sales order as authorization to fill the order and release the goods to the shipping department. When goods are pulled from inventory, a packing slip is normally produced to detail the items that will be shipped to the customer.

Shipping Sales Orders

Segregating the responsibility for shipping from approving and filling orders helps to prevent shipping clerks from making unauthorized shipments. In addition, an important manual control requires that shipping clerks make independent checks to determine (1) that goods received from the warehouse are accompanied by appropriate authorization and (2) that the order was properly filled (goods received agree with the details of the sales order) (EO1).

The shipping function also involves preparing multicopy shipping documents or bills of lading. Shipping documents can be prepared manually on prenumbered forms. Alternatively, the documents can be produced with the computer by using order information already in the computer and adding appropriate shipping data such as quantities shipped, carrier, and freight charges.

Daily computer checks to account for all shipping documents and to determine that all sales orders result in shipments and that a sales invoice was subsequently prepared for each shipping document provide an important control for the completeness assertion (C1).

Recording Sales

The process of recording sales involves preparing and sending prenumbered sales invoices to customers (billing customers) and recording sales invoices accurately and in the proper accounting period (recording sales). The auditor's primary concerns pertaining to this function are that the sales invoices are recorded accurately and in the proper period. The latter pertains to when the revenue is earned, which is usually when the goods are shipped.

The auditor's major concerns regarding billing are that customers are billed (1) for all shipments, (2) only for actual shipments (no duplicate billings or fictitious transactions), and (3) at authorized prices. Programmed application controls that reduce the risk of misstatement in the billing and recording process (and related specific audit objectives) include the following:

- Computer matching of sales invoice information with sales order and shipping information (EO1).
- Computer matching of sales prices on the sale invoice with an authorized price list and sales order prices in preparing the sales invoices (VA1).
- Computer-programmed checks on the mathematical accuracy of sales invoices (VA1).
- Comparison of control totals for shipping documents with corresponding totals for sales invoices (EO1 and C1).
- Computer comparison of date for recording the sales invoices with the time period in which the goods were shipped (EO1 and C1).
- Computer comparison of the customer number on the sales invoice with the account number on the sales order, which should have previously been compared with the master customer file (PD1).

- Run-to-run totals match the sum of beginning receivables balances, plus posted sales, with ending receivables balances (C1, EO1, VA1).

File copies of the sales invoices may be maintained in the billing department. A computer record of the billings is maintained in a sales transactions file.

Two important manual controls should also be in place in a system of well-designed internal control:

- Monthly statements should be mailed to customers with instructions to report any exceptions to a designated accounting supervisor not otherwise involved in the execution or recording of revenue cycle transactions (all revenue cycle objectives).
- The entity should establish an appropriate level of regular review and accountability by sales executives for sales analyses by product, division, salesperson, or region, and comparisons with budgets (all sales transaction objectives). Sales executives should also be held accountable for gross margins and subsequent collection of sales and accounts receivable writeoffs (VA4).

As an exercise, it is suggested that the student consider the rationale for the linkage of the above controls to the specific audit objectives indicated for each.

ILLUSTRATIVE SYSTEM FOR CREDIT SALES

In practice, there are many variations in the systems used to perform the functions involved in processing credit sales transactions. Figure 14-6 shows a flowchart of an on-line, batch-entry processing system that incorporates most of the controls discussed in the preceding sections. This figure summarizes the following information that is important to documenting the auditor's understanding of internal control: (1) key functions, (2) the documentary audit trail, (3) key reports produced by the system, and (4) the computer programs and files involved in the accounting system. Not every copy of every document is documented in the flowchart, inasmuch as the auditor needs only an understanding sufficient to plan the audit. The flowchart also follows the path that the transaction follows from initiating the transaction to recording in the general ledger, which support the financial statements. The auditor should also document important activities or control procedures, which may be accomplished by a brief written summary similar to the one that follows.

illustrative system for credit sales transactions

In the illustrative system, as orders are received sales order clerks use on-line terminals and an order program to determine that the customer has been approved and that the order will not cause the customer's balance to exceed the customer's authorized credit limit. If the customer is a new one, the order is transferred to the credit department, which checks credit and enters customer information on the customer master file for approved customers. The program also checks the inventory master file to determine that goods are on hand to fill the order and prices the sales order based on information in an approved master price file. If the order is accepted,

(continues)

Figure 14-6 ■ System Flowchart – Credit Sales Transactions