### WORLDCOM AND ENRON: LESSONS FOR THE INVESTING AND FINANCING CYCLES

In June of 2002, WorldCom announced that during the previous two years \$3.8 billion in costs had been capitalized rather than expensed. This is only half the story. Eventually we learned that WorldCom overstated earnings by more than \$7.2 billion during the period of 1999 through the first quarter of 2002. WorldCom overstated earnings by approximately \$3.3 billion for 1999 and 2000 combined, \$3.0 billion for the year ended 2001, and \$797 million for the first quarter of 2002.

The cost of capacity is a major expense for telephone companies. During the 1998–2002 period, many telephone companies were investing in increased capacity in terms of both fiber-optic lines and the ability to deliver cellular telephone service. Some of the capacity was purchased, and other access to capacity was rented. During this period of time, WorldCom reported better profit margins than anyone in the industry. Unfortunately, the reported profitability was driven by overstating long-term assets by some \$7.2 billion.

The heroes in the WorldCom story were the internal auditors, who realized that capital expenditures exceeded the amounts authorized by the board of directors by over \$2 billion. Internal auditors also uncovered over \$500 million in capitalized costs that were not supported by vendor's invoices, and they showed a tenacity in understanding issues that were not clearly explained by others in the accounting staff. If the internal auditors were heroes, a number of accountants also played the role of villain. The SEC has brought suit against Scott Sullivan, the CFO; David Meyers, the controller; Buford Yates Jr., director of General Accounting; and Betty Vinson and Troy Normand, accountants in general accounting for WorldCom.

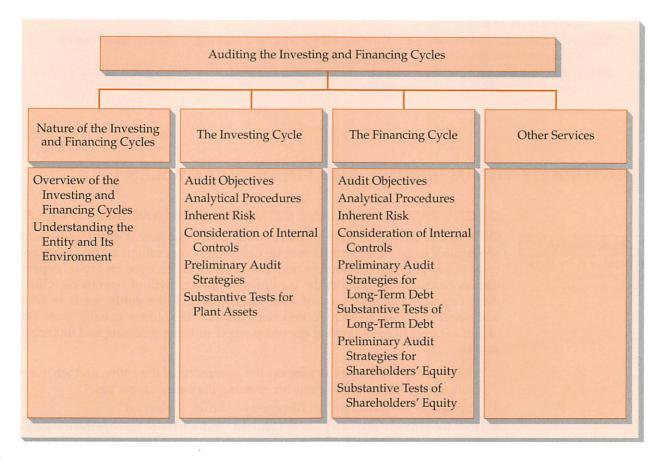
The Enron scandal is also about financing and investing activities. A significant component of the Enron story revolved around the use of special-purpose entities that allowed Enron to move both assets and debt off the balance sheet. Some estimates put the amount of off-balance sheet debt at over \$20 billion. When Enron needed to borrow because of poor operating cash flows, it had no more borrowing capacity. It could not retire debt as it came due, and shareholders lost billions of dollars in the decline of the value of their shares. The critical aspect of Enron's fraudulent financial reporting was the failure to report how highly leveraged the company really was.

These two major companies that engaged in fraudulent financial reporting did so with issues directly related to the investing and financing cycle. Chapter 17 explains the auditor procedures that should have been performed to uncover these frauds.

**Sources:** SEC Accounting and Auditing Enforcement Release 1678 and related enforcement releases (1585, 1635, 1642, 1650, 1678, 1977). Bethany McLean and Peter Elkind, *The Smartest Guys in the Room,* (New York: Penguin Group (USA), 2003).

### [PREVIEW OF CHAPTER 17]

Chapters 14, 15, and 16 focused on operating activities. This chapter focuses on investing and financing activities (using the FASB definitions of investing and financing activities in FASB 95, Statement of Cash Flows). The following diagram provides an overview of the chapter organization and content.



Chapter 17 focuses on the following aspects of the auditor's decision process associated with auditing investing and financing activities.

### 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 investing and financing cycles?
- **D2.** How does understanding the entity and its environment influence audit planning decisions in the investing and financing cycles?
- D3. How are specific audit objectives developed for the audit of plant assets in the investing cycle?
- **D4.** What audit planning decisions should be made when developing an audit program for the plant assets?
- D5. What factors are involved in determining an acceptable level of tests of details risk for plant assets?
- **D6.** How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for plant assets?

- **D7.** How are specific audit objectives developed for long-term debt and shareholders' equity in the financing cycle?
- **D8.** What audit planning decisions should be made when developing an audit program for the financing cycle?
- **D9.** What is involved in determining a preliminary audit strategy and planning an audit program for substantive tests for long-term debt?
- **D10.** What is involved in determining a preliminary audit strategy and planning an audit program for substantive tests for shareholders' equity?
- **D11.** How does the auditor use the knowledge obtained during the audit of the investing and financing cycles to support other assurance services?

### NATURE OF THE INVESTING AND FINANCING CYCLES

### **Audit Decision 1**

■ What is the nature of the investing and financing cycles?

### **OVERVIEW OF THE INVESTING AND FINANCING CYCLES**

On a regular basis management makes decisions about how it uses resources to accomplish its goals. Resources may be deployed on operations and on management of key processes. Resources may also need to be deployed on capital expenditures necessary to support the continuation and growth of operations. Often these capital expenditures are of such magnitude that the entity needs to seek additional financing to acquire necessary assets. The auditor usually wants to obtain answers to the following questions when auditing investing and financing activities:

- What assets are necessary to support the operations of the entity, and what are management's long-range plans for growing the entity's asset base?
- What assets were acquired, or disposed of, during the period?
- How were newly acquired assets financed, and what are management's long-range plans for financing the entity's growth?

These questions directly address an entity's investing and financing activities.

Investing activities are the purchase and sale of land, buildings, equipment, and other assets not generally held for resale. In addition, investing activities include the purchase and sale of financial instruments not intended for trading purposes (discussed in Chapter 18). An entity acquires these assets because they support its operations and core processes. As a rule of thumb, most businesses will acquire new assets if the rate of return generated by those assets exceeds the after-tax marginal cost of debt financing associated with acquiring additional assets. The first step in auditing investing activities involves understanding the assets that are needed to support the entity's operations (e.g., machinery, equipment, facilities, land, or natural resources) and the rate of return that a company expects to achieve from its underlying asset base.

The second step in auditing investing activities involves determining what assets were acquired during the period. Usually the growth in fixed assets should demonstrate a consistent relationship with the growth in revenues, accounting

for some start-up period. Long-term assets are fairly stable for most entities. In other words, most of the fixed assets that existed at the end of the year also existed at the beginning of the year. Hence, the auditor often focuses audit strategy on auditing the changes in long-term assets rather than the entire population of long-term assets.

Financing activities include transactions and events whereby cash is obtained from or repaid to creditors (debt financing) or owners (equity financing). Financing activities would include, for example, acquiring debt, capital leases, issuing bonds, or issuing preferred or common stock. Financing activities would also include payments to retire debt, reacquiring stock (treasury stock), and the payment of dividends. If the auditor knows the changes that have occurred in investing activities, the changes in financing activities often are predictable. If, for example, an entity finances equipment with a capital lease, the values of the additional asset and debt are directly related. The population of debt and equity instruments is also usually small. For example, a public company may have approximately 50 different notes payable, and only one to three classes of equity securities, which are small population sizes. As a result, audit strategy often focuses on auditing the population of debt and equity at year-end.

### **Audit Decision 2**

■ How does understanding the entity and its environment influence audit planning decisions in the investing and financing cycles?

### UNDERSTANDING THE ENTITY AND ITS ENVIRONMENT

When the auditor develops a business-based approach to investing activities she or he studies the linkage between long-term assets and the financing used to acquire those investments. If a company engages in a major expansion of plant assets, it must also consider how it will finance the acquisition. The auditor must also be alert to the possible use of variable interest entities in highly leveraged deals that put both the property and the financing off balance sheet, and raise questions about whether the variable interest entity should be consolidated. It is essential that the auditor understand how assets support the operations of the entity, what new assets were acquired, and how they were financed. Figure 17-1 provides summary financial information related to financing and investing activities for the industries that have been discussed throughout Part 4 of the text.

There is a sizable variation between industries in the importance of financing and investing activities to the entity's operations. Hence, industry knowledge is important to developing expectations regarding the financial statements. In many of these industries investments in property, plant, and equipment are material, and carefully controlled. Because new investments are often accompanied by additional debt or equity financing, it is a common audit strategy to have the same individual audit both investing and financing activities.

### THE INVESTING CYCLE

The following discussion focuses on **plant assets** (property, plant, and equipment). The logic that applies to the audit of plant assets is essentially the same as the logic that would apply to long-term assets such as natural resources or goodwill that may result in a merger or acquisition. Investing activities associated with investing in monetary assets are discussed in Chapter 18.

Figure 17-1 

Understanding an Entity's Investing and Financing Activities

# Perspective about the Entity's Developing a Knowledgeable Financial Statements (Industry Median) **Example Industry Traits**

# Mfg. of Construction Machinery and Equipment

- percentage of total assets only because of the signif- Fixed assets are material. Fixed assets are a lower icance of receivables and inventory.
- Fixed assets are commonly financed with financing

## Computer Mfg.

- Fixed assets are a nominal portion of business model which is driven by technology.
- Equity and reinvested earnings have been a significant source of financing.
- There is an equity need for early-growth-stage companies.

### Retail Grocer

- · Fixed assets are a significant portion of business model.
- Sales are driven by sq. ft. of retail space.
  - Store size influences product mix.
- Fixed assets are often financed with long-term debt.

- profitability often depends on the quality and loca-· This is a very fixed assets-intense industry, and tion of properties.
  - Long-term assets are normally debt financed.

# Local School District

- in place for long periods. Asset life is often longer Fixed asset intense, but fixed assets are often kept
  - than financing period for bonds issued.

     There is risk if student age population decreases.

### Net Fixed Assets as a % of Total Assets: 23.1% Operating Debt as a % of Total Assets: 29.7% Financing Debt as a % of Total Assets: 28.1% Equity as a % of Total Assets: 42.2% Sales to Net Fixed Assets: 10.0 Sales to Total Assets: 2.0

Net Fixed Assets as a % of Total Assets: 15.2% Operating Debt as a % of Total Assets: 34.2% Financing Debt as a % of Total Assets: 27.0% Equity as a % of Total Assets: 38.8% Sales to Net Fixed Assets: 25.7 Sales to Total Assets: 2.3 Net Fixed Assets as a % of Total Assets: 40.9% Operating Debt as a % of Total Assets: 32.2% Financing Debt as a % of Total Assets: 38.6% Equity as a % of Total Assets: 29.2% Sales to Net Fixed Assets: 13.3 Sales to Total Assets: 5.0 Net Fixed Assets as a % of Total Assets: 74.4% Operating Debt as a % of Total Assets: 21.8% Financing Debt as a % of Total Assets: 70.3% Equity as a % of Total Assets: 7.9% Sales to Net Fixed Assets: 0.7 Sales to Total Assets: 0.6

Net Fixed Assets as a % of Total Assets: 49.5% Operating Debt as a % of Total Assets: 18.9% Financing Debt as a % of Total Assets: 23.7% Equity as a % of Total Assets: 57.4% Sales to Net Fixed Assets: 1.3 Sales to Total Assets: 0.7

## Material Misstatement Assessing the Risk of

- There is little risk of asset obsolescence.
- Debt tends to be stable and concentrated with a few sources.
- ufacturers, have a higher degree of obsolescence Chip manufacturers, rather than computer manof production technology.
- Debt tends to be stable and concentrated with a few sources.
- may create possible store closings and discontin-· Locations are key to sales, and poor locations ued operations.
  - Debt tends to be stable and concentrated with a few sources.
- There is higher risk with a high volume of property transactions.
- Poor property performance may represent asset impairment situations.
- financing will be put in an off-balance sheet vari- There is a higher risk that both the property and able interest entity.
- There are few property transactions in a given year.
- · Public bonding is usually used for debt, which is backed by tax levies.
  - Possible asset impairment occurs if student population decreases rapidly.

### **Audit Decision 3**

■ How are specific audit objectives developed for the audit of plant assets in the investing cycle?

### **AUDIT OBJECTIVES**

The classes of transactions associated with the audit of plant assets include (1) acquiring fixed assets (whether purchased or manufactured), (2) disposals of fixed assets (sale or trade-in of fixed assets), (3) repair and maintenance transactions (which might include transactions which should be capitalized) discounts, and (4) depreciation expense (the matching of the cost of fixed assets with revenues). The specific audit objectives for the audit of fixed assets in the investing cycle are presented in Figure 17-2. Each of the objectives is derived from management's implicit or explicit assertions about fixed assets transactions, balances and disclosures. These objectives are the primary ones for this cycle in most audits. They are not intended to be all-inclusive for all client situations.

To achieve each of these specific audit objectives, the auditor employs various parts of the audit planning and testing methodologies described in Parts 2 and 3 of this book, as illustrated in the previous three chapters. This includes under-

Figure 17-2 Selected Specific Audit Objectives for the Investing Cycle (Plant Assets)

### **Specific Audit Objectives**

### **Transaction Objectives**

Occurrence. Recorded acquisitions of plant assets (EO1), disposals of plant assets (EO2), and repair and maintenance transactions (EO3) represent transactions that occurred during the year.

Completeness. All acquisitions of plant assets (C1), and disposals of plant assets (C2) and repair and maintenance transactions (C3) that occurred during the period were recorded.

**Accuracy.** Acquisitions of plant assets **(VA1)**, disposals of plant assets **(VA2)**, and repair and maintenance transactions **(VA3)** are accurately valued using GAAP and correctly journalized, summarized, and posted. Transactions for depreciation expense are properly valued **(VA4)**.

Cutoff. All acquisitions of plant assets (EO1 and C1), and disposals of plant assets (EO2 and C2), and repair and maintenance transactions (EO3 and C3), have been recorded in the correct accounting period.

Classification. All acquisitions of plant assets (PD1), and disposals of plant assets (PD2), and repair and maintenance transactions (PD3) have been recorded in the proper accounts.

### **Balance Objectives**

Existence. Recorded plant assets represent productive assets that are in use at the balance sheet date (EO4). Completeness. Plant assets balances include the effects of all applicable transactions during the period (C4). Rights and Obligations. The entity owns or has rights to all recorded plant assets at the balance sheet date (RO1).

Valuation and Allocation. Plant assets balances are stated at cost (VA5) less accumulated depreciation (VA6) and are written down for material impairments (VA7).

### **Disclosure Objectives**

Occurrence and Rights and Obligations. Disclosed plant and equipment events and transactions have occurred and pertain to the entity (PD4).

Completeness. All PP&E disclosures that should have been included in the financial statements have been included (PD5).

Classification and Understandability. All PP&E information is appropriately presented and described and information in disclosures is clearly expressed (PD6).

Accuracy and Valuation. PP&E information is disclosed accurately and at appropriate amounts (PD7).

standing relevant analytical procedures, assessing inherent risk, and assessing control risk when developing audit strategies.

### ANALYTICAL PROCEDURES

### **Audit Decision 4**

What audit planning decisions should be made when developing an audit program for the plant assets? Analytical procedures are required as part of audit planning, they are cost effective, and they may assist the auditor in identifying assertions that may be misstated. Figure 17-3 presents some example analytical procedures along with an explanation of the problems that they might identify. Plant assets should be relatively stable, and as a result, analytical procedures may provide assurance about the fair presentation in the financial statements. However, the auditor should show an appropriate level of professional skepticism when evaluating the appropriateness of depreciation expense, as well as policies regarding whether a lease is a capital lease or an operating lease, and whether costs should be capitalized or directly expensed.

### INHERENT RISK

Inherent risk for long-lived assets is a complex issue. On one hand, inherent risk for the existence assertion is often low because fixed assets are not vulnerable to theft. On the other hand, if incentives to improve earnings are present there is a higher risk that management may attempt to capitalize expenses. The completeness assertion may represent a significant inherent risk if a company uses a form of off-balance sheet financing that places the property and debt in a variable interest entity. The completeness assertion may also be high risk if it is difficult to determine whether the economic substance of a lease is an operating lease or a

Figure 17-3 Analytical Procedures Commonly Used to Audit Plant Assets

Ratio	Formula	Audit Significance
Fixed asset turnover	Net sales ÷ average fixed assets	An unexpected increase in fixed asset turnover may indicate the failure to record or capitalize depreciable assets.
Total asset turnover	Net sales ÷ average total assets	An unexpected increase in total asset turnover may indicate the failure to record or capitalize depreciable assets.
Return on total assets	(Net income+(interest × (1-tax rate))) ÷ average total assets	An unexpected increase in return on assets may indicate the failure to record or capitalize depreciable assets.
Depreciation expense as a percent of property, plant, and equipment	Depreciation expense ÷ average property plant and equipment	An unexpected increase or decrease in the depreciation expense as a percent of depreciable assets may indicate an error in calculating depreciation.
Repair expenses to net sales	Repair and maintenance expense ÷ net sales	An unexpected increase in repair and maintenance expense may indicate the possibility that assets that should have been capitalized have been expensed.

### improving earnings by managing depreciation estimates

In February 1998, Waste Management announced that it would take a pretax charge of \$3.54 billion. The size of the charge stunned the investment community, and soon thereafter the SEC began an investigation into Waste Management's accounting practices. The cause of the write-off was to correct for an accumulation of understated accounting estimates over the prior decade. With hindsight it was determined that early in the 1990s Waste Management changed its depreciation policies at the direction of its president, Phil Rooney. In order to improve the company's earnings picture, the company began stretching the depreciation schedules on trucks (which cost about \$150,000 each) from an industry standard 8–10 years to 10–12 years. Standard industry practice was to claim no salvage value on garbage hauling equipment, and Waste Management claimed approximately \$25,000 per truck. For an individual piece of equipment, these seem like small changes. In aggregate, they were significant. Waste Management was a capital-intensive company with heavy fixed costs. In order to show positive results to Wall Street, Waste Management consciously stretched depreciation schedules, decreased its expenses, and improved earnings. A few years later the problem resulted in an accumulated overvaluation of assets of \$3.5 billion.

Depreciation is an important accounting estimate. In this case Waste Management followed accounting practices different from others in the industry, resulting in lower depreciation charges and higher earnings. However, these accounting changes did not improve Waste Management's cash flow. Eventually, the economic substance of Waste Management's business caught up with the company, and significant write-downs were necessary. When auditing plant assets, it is important for the auditor to use his or her knowledge of the business and industry to test the reasonableness of both estimated useful lives and salvage values.

Source: Peter Elkind, "Garbage In, Garbage Out," Fortune, May 25, 1998, pp. 130-138.

capital lease. The rights and obligations assertion is significant because assets are usually pledged as collateral for underlying debt. Inherent risk for the valuation assertion is also high or maximum depending on the industry and the degree of difficulty associated with estimating useful lives and salvage values for depreciation methods and the extent to which the value of long-lived assets is impaired. Finally, fixed assets disclosures are relatively straightforward, and misstatements represent only a moderate inherent risk.

### **CONSIDERATION OF INTERNAL CONTROLS**

The same aspects of internal controls that establish a high level of control consciousness such as a strong control environment, effective risk assessment, effective accountability for the use of resources, and monitoring of the control system are important in the context of accounting for plant assets. Specific control activities are discussed in the following paragraph. Although some of these transactions are routine, many are not, and the involvement of an effective disclosure committee is important for many of these assertions.

One of the key transactions associated with plant assets is the initial accounting for the acquisition of plant assets. The features of the accounting system and specific control procedures associated with the expenditure cycle discussed in Chapter 15 apply to the acquisition of furniture or equipment and the purchase of

repair and maintenance. Hence, the controls described in Chapter 15 over the existence (EO1, EO3), completeness (C1, C3), accuracy (VA1, VA3), cutoff (EO1, C1, EO3, C3), and classification of purchases and repair and maintenance transactions (PD1, PD3) should control the acquisition of fixed assets. The disclosure committee should regularly review the entity's policies for determining whether a purchase, or new lease, should be capitalized or expensed (PD1, PD3). Transactions that are individually material, such as the acquisition of land or buildings, or major capital expenditures, are usually subject to separate controls including capital budgets and authorization by the board of directors (EO1). As a result, control risk may be low for many assertions. Finally, the disclosure committee should be involved in reviewing depreciation policies for new assets and the reasonableness of assumptions about useful lives and salvage values (VA4, VA6). Once deprecation polices are determined, computer programs are used to calculate depreciation expense, and these programs usually include reasonableness tests such as limit tests of checks to ensure that assets are not overdepreciated (e.g., the book value of assets should be greater than zero) (VA4).

Controls over the disposition of assets should include specific controls for the authorization for the sale, or trade-in, of fixed assets (EO2). Because the sale, or trade-in, of fixed assets is less routine, the disclosures committee should become more involved in reviewing the completeness and accuracy of accounting for these transactions (EO2, C2, VA2, PD2).

Controls over fixed asset balances often include physical controls over fixed assets as well as the maintenance of a fixed asset inventory that is periodically checked against existing assets (EO4, C4). Controls over the valuation of assets at historical cost (VA5) are directly related to the controls over the valuation of recorded transactions (VA1–VA4). The disclosures committee also has responsibility for reviewing specific transactions where property and debt reside in variable interest entities and for determining whether such transactions are properly accounted for (EO4, C4). The disclosures committee should also review any rights or obligations issues (RO1) and issues surrounding asset impairment (VA7) on a regular basis. Finally, the disclosures committee should review all financial statement disclosures before they are presented to the auditor (PD4, PD5, PD6, and PD7).

### PRELIMINARY AUDIT STRATEGIES

Figure 17-4 summarizes some key issues related to preliminary audit strategies for the audit of plant assets. Auditors may follow very different approaches for public and private companies. Public companies with ongoing construction projects or acquisitions may have effective controls over these expenditures. However, most private companies do not have a disclosure committee, and as a result the auditor is likely to follow a primarily substantive approach for most, if not all, assertions.

An important aspect of fixed assets is that the balance is fairly stable over time. For most entities, the entire inventory that was present at the prior year-end is now gone. Yet most of the fixed assets that were present at the prior year-end are still present. As a result, many substantive tests focus on auditing the ending balance by tying beginning balance to the prior year's audit and then auditing the transactions during the year.

### **Audit Decision 5**

What factors are involved in determining an acceptable level of tests of details risk for plant assets?

Figure 17-4 Preliminary Audit Strategies for Plant Assets

Assertion	Inherent Risk	Control Risk	Analytical Procedures Risk	Test of Details Risk	
Existence and Occurrence	Moderate to Maximum: On one hand, the risk of misappropriation of fixed assets is small. On the other hand, there is a significant risk that items that should be expensed are capitalized.	Low to High: Controls over the occurrence of fixed asset acquisition are often effective, as are physical controls over fixed assets. Controls over accounting policy regarding the capitalization of costs depend on disclosure committee effectiveness.	Moderate to High. Analytical procedures are more effective at signaling problems with unintentional misstatements than with fraudulent financial reporting. As a result, analytical procedures may not provide assurance about the existence of fixed assets.	Low to Moderate. Tests of details usually focus on tests of transactions. Vouching fixed asset transactions and inspecting acquired assets can be performed at an interim date and updated in final stages of the audit.	
Completeness	Moderate to Maximum: There may be a signifi- cant risk associated with the acquisition of properties through the use of variable interest entities. There is also a moderate inherent risk that purchases may not be recorded.	Moderate to Maximum: Controls over accounting for off balance sheet financing depend on the effectiveness of the dis- closure committee. Other risks relate to controls over completeness of purchases.	Moderate to High. Analytical procedures are more effective at signaling problems with unintentional misstatements than with fraudulent financial reporting. As a result, analytical procedures may not provide assurance about the completeness of fixed assets.	Low to Moderate. Tests of details usually focus on review of authorization of major capital expenditures by the board of directors, plus inquiry, observation, plant tours, and reading contracts and leases.	
Rights and Obligations	Moderate: Fixed assets are often pledged as collateral for loans that are used to finance fixed asset acquisition.	Moderate to Maximum: Controls over disclosure of rights and obligations depend on disclosure committee effectiveness.	Maximum. Analytical procedures are usually not directed at rights and obligations issues.	Low: Confirmations of lenders of assets pledge as collateral are usually obtained as part of audi ing financing activities.	
Valuation or Allocation	High to Maximum: The major valuation issues are associated with the reasonableness of deprecation estimates along with the issue of impairment tests of fixed assets.	Moderate to Maximum: Controls over accounting estimates such as depre- ciation and the need for write-downs are associ- ated with the impairment of fixed assets that depend on disclosure committee effectiveness.	Moderate to High. Analytical procedures are more effective as signaling problems with unintentional misstatements than with fraudulent financial reporting. As a result, analytical procedures may not provide assurance about the valuation of fixed assets.	Low: Auditors need to test the reasonableness of useful lives, salvage val- ues, and depreciation expense estimates. Audi- tors must evaluate whether the value of fixed assets is impaired.	
Presentation and Disclosure	Moderate: Disclosures related to fixed assets are not complex.	Moderate to Maximum. Controls over disclosures depend on disclosure committee effectiveness.	Maximum: Analytical procedures are not directed at disclosures.	Low: The auditor will often perform tests of details to evaluate the quality and accuracy of financial statement disclosures.	

### **Audit Decision 6**

■ How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for plant assets?

### SUBSTANTIVE TESTS FOR PLANT ASSETS

Possible substantive tests for plant asset balances in a recurring engagement and the specific account balance audit objectives to which the tests relate are shown in Figure 17-5. Each substantive test is explained in the following sections.

### **Initial Procedures**

An important initial procedure involves obtaining an understanding of the business and industry. Industries that are very capital intensive usually have heavy fixed operating costs and require significant volume to break even. As discussed earlier in the chapter, it is important for the auditor to understand how assets support core activities of the entity and the generation of earnings. This understanding of the economic substance behind plant assets transactions provides the context for evaluating the reasonableness of evidence collected during the audit.

Before performing other substantive tests in the audit program, the auditor determines that the beginning general ledger balance for plant asset accounts agrees with the prior period's working papers. Among other things, this comparison will confirm that any adjustments determined to be necessary at the conclusion of the prior audit and reflected in the prior period's published financial statements were also properly booked and carried forward. Next, the auditor should test the mathematical accuracy of client-prepared schedules of additions and disposals and reconcile the totals with changes in the related general ledger balances for plant assets during the period. In addition, the auditor should test the schedules by vouching items on the schedules to entries in the ledger accounts and tracing ledger entries to the schedules to determine that they are an accurate representation of the accounting records from which they were prepared. The schedules may then be used as the basis for several of the other audit procedures. Figure 17-6 illustrates an auditor's lead sheet schedule for plant assets and accumulated depreciation.

### **Substantive Analytical Procedures**

An important part of the investing cycle is determining that the financial information subjected to audit is consistent with the auditor's expectations. The earlier discussions regarding knowledge of the business and industry and analytical procedures addressed procedures that the auditor might perform to assess the reasonableness of balances for plant assets, depreciation expense, repair and maintenance expense, and expenses associated with operating leases (see Figure 17-3). When performing analytical procedures, the auditor should maintain an appropriate level of professional skepticism and investigate abnormal results. If the results of analytical procedures are consistent with the auditor's expectations, audit strategy might be modified to reduce the extent of details tests of transactions and balances discussed below.

### **Tests of Details of Transactions**

These substantive tests cover three types of transactions related to plant assets: (1) additions, (2) disposals, and (3) repairs and maintenance.

Figure 17-5 Possible Substantive Tests of Plant Asset Assertions

Category	Substantive Test	Specific Audit Objectives
Initial Procedures	<ol> <li>Obtain an understanding of the entity and its environment and determine:         <ul> <li>The significance of plant assets, and changes in plant assets, to the entity.</li> <li>Key economic drivers that influence the entity's acquisition of plant assets.</li> <li>Industry standards for the extent to which the entity is capital intensive and the impact of plant assets on earnings.</li> </ul> </li> </ol>	All
	d. Understand the degree to which the company has used variable interest entities and operating leases to finance assets.	EO4, C4
	2. Perform initial procedures on plant assets balances and records that will be subjected to further testing.	EO1, EO4
	a. Trace beginning balance for plant assets and accumulated depreciation to prior year's working papers.      Beginning to be a compared for plant assets and depreciation to prior year's working papers.	370.4
	<ul> <li>Review activity in general ledger accounts for plant assets and depreciation expense and investigate entries that appear unusual in amount or source.</li> </ul>	VA4
	<ul> <li>c. Obtain client-prepared schedules of plant asset additions, retirements, and depreciation expense, and determine that they accurately represent the underlying accounting records from which they were prepared by: <ol> <li>i. Footing and crossfooting the schedules and reconciling the totals with increases or decreases in the related general ledger balances during the period.</li> <li>ii. Testing agreement of items on schedules with entries in related general ledger accounts.</li> </ol> </li></ul>	VA1, VA2, VA3
Analytical	3. Perform analytical procedures:	All
Procedures	<ul> <li>a. Develop an expectation for plant assets using knowledge of the industry and the entity's business activity.</li> <li>b. Calculate ratios: <ol> <li>i. Fixed asset turnover</li> <li>ii. Depreciation expense as a percent of sales</li> </ol> </li> </ul>	
	<ul><li>iii. Repair and maintenance expense as a percent of sales</li><li>iv. Rate of return on assets</li><li>c. Analyze ratio results relative to expectations based on prior years, industry data, budgeted amounts, or other data.</li></ul>	
Tests of Details of Transactions	<ul> <li>4. Vouch plant asset additions to supporting documentation.</li> <li>5. Vouch plant asset disposals to supporting documentation.</li> <li>6. Vouch a sample of entries to repairs and maintenance expense.</li> <li>7. Vouch the recording of new capital lease and operating leases to underlying contracts.</li> </ul>	EO1, VA1, PD1, EO4, VA EO2, VA2, PD2, EO4, VA EO3, VA3, PD3, EO4, VA EO1, C1, VA1, PD1
Tests of Details	8. Inspect plant assets.	FO4
of Balances	<ul> <li>a. Inspect plant asset additions.</li> <li>b. Tour other plant assets and be alert to evidence of additions and disposals not included on client's schedules and to conditions that bear on the proper valuation and classification of the plant assets.</li> </ul>	EO4 EO4, C1, C2, C4
	9. Examine title documents and contracts.	RO1
Tests of Details	10. Evaluate the fair presentation of depreciation expense by evaluating	VA6
of Accounting Estimates	the appropriateness of useful lives and estimated salvage values.  11. Determine if any significant events have resulted in an impairment of the value of plant assets.	VA7
Tests of Details of Presentation	12. Compare statement presentation with GAAP.  a. Determine that plant assets and related expenses, gains, and losses are	PD4, PD7
and Disclosure	properly identified and classified in the financial statements.  b. Determine the appropriateness of disclosures related to the cost, book value, depreciation methods, and useful lives of major classes of plant assets,	PD4, PD7
	the pledging of plant assets as collateral, and the terms of lease contracts.  c. Evaluate the completeness of presentation and disclosures for plant assets in drafts of financial statements to determine conformity to GAAP by	PD5
	reference to disclosure checklist.  d. Read disclosures and independently evaluate their classification and understandability.	PD6

Figure 17-6 Plant Asset and Accumulated Depreciation Lead Schedule

	1	.1		C	0	o I	o I					
11 / 42   4 / 42   112 / 42		Balance 12/31/X1		462,76	1,255,620	239,700	1,958,080	FF				
W/P Ref: $\mathcal{Y}$ Prepared by: $C.J.\mathcal{Y}$ . Date: $2/\#/\pi^2$ Reviewed by: $R.C.P$ . Date: $2/12/\pi^2$	ciation	Adjustments (DR)/CR		(D <sub>(1,000)</sub> 462,760	(1) 1,000 1,255,620		0	щ				
id by: C.g.,	Accumulated Depreciation	ρ Provisions Disposals			172,500	21,000	193,500	Н				#
Prepare	Accum	rovisions		84,320	352,910	43,250	480,480	щ				W/P a8
		Balance 12/31/X0 P		379,4404 84,320	370,000 ② 25,000 4,392,250 1,074,2104 352,910	217,4504	1,671,100	щ				dings intry #21 om
8		Balance 12/31/X1	450,000	2,208,000	4,392,250	887,400	0 7,937,650	Ħ Ħ				ndrd im Busi x adjustimg x
		Adjustments DR/(CR)		@(25,000) 2,208,000	② 25,000		0	П				additiom neco taccoumt. Se
_	Asset Cost	Disposals			370,000	110,000	480,000	IL				punchased Equipmen
epreciation		Additions		125,000	980,000	853,400M 144,000	,249,000	IL	papens			xexation for simeny and
Accumulated D		Balance 12/31/X0	450,000M	2,108,0004 125,000	3,757,2504 980,000	853,4004	7,168,650 1,249,000	π	31/AO working			cumulated depn econded in Mach
Highlift Company Property, Plant, and Equipment and Accumulated Depreciation Lead Schedule December 31,20X1		Account Title	Land	Buildings	Mach. and equip.	Furn, and fixtures			Inaced to general Aedgen and 12/31/140 working paperns		FF Crossfooted and footed	To nxclassify cost and nelated accumulated depnixiation for punchased addition nxconded in Buildings account that should have been nxconded in Machimery and Equipment account. See adjusting entry *21 on W/P AE-+
Highlift Company Property, Plant, and Lead Schedule December 31,20X1		Acct. No.	301	302	303	304			Inaced A	F Footed	Trosafor	To necla.
Highl Prope Lead Decen		W/P Ref.	G-1	G-1	G-3	6-4			<u>~</u>	IT.	FF (	© 8

### **Vouch Plant Asset Additions**

All major additions should be supported by documentation in the form of authorizations in the minutes, vouchers, invoices, contracts, and canceled checks. The recorded amounts should be vouched to supporting documentation (EO1). If there are numerous transactions, the vouching may be done on a test basis. In performing this test, the auditor ascertains that appropriate accounting recognition has been given to installation, freight, and similar costs. For construction in progress, the auditor may review the contract and documentation in support of construction costs.

When plant assets are acquired under a capital lease, the cost of the property and the related liability should be recorded at the present value of the future minimum lease payments (VA1). The accuracy of the client's determination of the present value of the lease liability should also be verified by recomputation. Vouching additions provides evidence about the existence or occurrence (EO1), rights and obligations (RO1), and valuation or allocation assertions (VA1).

### **Vouch Plant Asset Disposals**

Evidence of sales, retirements, and trade-ins should be available to the auditor in the form of cash remittance advices, written authorizations, and sales agreements. Such documentation should be carefully examined to determine the accuracy and propriety of the accounting records, including the recognition of gain or loss, if any. The following procedures may also be useful to the auditor in determining whether all retirements have been recorded (C2):

- Analyze the miscellaneous revenue account for proceeds from sales of plant assets.
- Investigate the disposition of facilities associated with discontinued product lines and operations.
- Trace retirement work orders and authorizations for retirements to the accounting records.
- Review insurance policies for termination or reductions of coverage.
- Make inquiry of management as to retirements.

Evidence that all retirements or disposals have been properly recorded relates to the existence or occurrence (C2), rights and obligations (RO1), and valuation or allocation assertions (VA3). Evidence supporting the validity of transactions that reduce plant asset balances relates to the completeness assertion.

Finally, evidence obtained while auditing disposals of plant assets may assist in the audit of depreciation expense. Significant losses on the disposal of assets may indicate that depreciation estimates may be inadequate. Significant gains may indicate that the client is overly aggressive in depreciating assets (VA4, VA6).

### **Review Entries to Repairs and Maintenance Expense**

The auditor's objectives in performing this test are to determine the propriety and consistency of the charges to repairs expense. Propriety involves a consideration of whether the client has made appropriate distinctions between capital and revenue expenditures. Accordingly, the auditor should scan the individual charges to identify those that are sufficiently material to be capitalized. For these items, the auditor should examine supporting documentation, such as the vendor's invoice, company work order, and management authorization to determine the propriety of the charge or the need for an adjusting entry (EO3). The auditor should also

consider other expenses that an entity might have capitalized, such as line costs in a telecommunications company or the capitalization of interest costs.

Consistency involves a determination of whether the company's criteria for distinguishing between capital items and expenditures are the same as in the preceding year. This substantive test provides important evidence concerning the completeness assertion (C4) for plant assets because it should reveal expenditures that should be capitalized. Analyzing the entries to repairs expense also results in evidence about the valuation of the plant assets. In addition, the analysis may reveal misclassifications in the accounts that related to the presentation and disclosure assertion (PD1, PD3).

### **Tests of Details of Balances**

Two procedures in this category of substantive tests are: (1) inspect plant assets, and (2) examine title documents and contracts.

### **Inspect Plant Assets**

The inspection of plant assets enables the auditor to obtain direct personal knowledge of their existence (EO4). In a recurring engagement, detailed inspections may be limited to items listed on the schedule of plant asset additions. However, the auditor should take a tour of other plant assets during which he or she should be alert to other evidence relevant to plant assets. For example, the astute auditor will look for indications of additions or retirements not listed on the schedules (C1, C2, C4), which relates to the completeness and existence assertions, respectively, and to evidence regarding the general condition of other plant assets and whether they are currently being used, which relates to the valuation or allocation and presentation and disclosure assertions.

### **Examine Title Documents and Contracts**

The ownership of vehicles may be established by examining certificates of title, registration certificates, and insurance policies. For equipment, furniture, and fixtures, the "paid" invoice may be the best evidence of ownership (RO1). Evidence of ownership in real property is found in deeds, title insurance policies, property tax bills, mortgage payment receipts, and fire insurance policies. Verification of ownership in real property can also be substantiated by a review of public records. When this form of additional evidence is desired, the auditor may seek the help of an attorney. The examination of ownership documents contributes to the existence or occurrence and rights and obligations assertions for plant assets.

Lease agreements convey to a lessee the right to use property, plant, or equipment, usually for a specified period of time. For accounting purposes, leases may be classified as either capital leases or as operating leases. The auditor should read the lease agreement to determine the proper accounting classification of the lease in accordance with Financial Accounting Standards Board pronouncements (PD1, PD4-7). When a capital lease exists, both an asset and a liability should be recognized in the accounts and statements. In addition to the existence or occurrence and rights and obligations assertions, the examination of lease contracts pertains to the presentation and disclosure assertion owing to the disclosures that are required under GAAP. The auditor should also examine contracts governing construction in progress, when applicable, to obtain evidence

relevant to evaluating the client's accounting and reporting for the related assets.

### **Tests of Details of Accounting Estimates**

Two important tests of accounting estimates include substantive tests to (1) review provisions for depreciation (VA4, VA6) and (2) evaluate impairments of plant assets (VA7).

### **Review Provisions for Depreciation**

In this test, the auditor seeks evidence on the reasonableness, consistency, and accuracy of depreciation charges. An essential starting point for the auditor in making this test is to ascertain the depreciation methods used by the client during the year under audit. The identity of the methods can be obtained from a review of depreciation schedules prepared by the client and inquiry of the client. The auditor must then determine whether the methods currently in use are consistent with the preceding year. On a recurring audit, this can be established by a review of last year's working papers.

Determination of the reasonableness of depreciation provisions involves consideration of such factors as (1) the client's past history in estimating useful lives and (2) the remaining useful lives of existing assets. The auditor's verification of accuracy is achieved through recalculation. Ordinarily, this is done on a selective basis by recomputing the depreciation on major assets and testing depreciation taken on additions and retirements during the year. Evidence of unusual gains and losses on the retirement of assets may indicate that depreciation estimates may be misstated. This substantive test provides evidence about all the financial statement assertions except the rights and obligations assertion.

### Impairment of Plant Assets

Events may occur between acquiring and retiring an asset that affect the valuation assertion and require an immediate writedown of the asset as addressed in FASB 121, Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of. The auditor should evaluate whether the client has appropriately accounted for the impairment of plant assets when there has been a material change in the way an asset is used, or when there has been a material change in the business environment. The evidence to evaluate impairment is based on an estimate of the undiscounted future cash flows from the asset. Based on the criteria established in FASB 121, an auditor should consider that the value of an asset is impaired when the undiscounted future cash flows from an asset are less than the book value of the asset.

### Tests of Details of Presentation and Disclosure

The financial statement presentation requirements for plant assets are moderately extensive (PD4-7). For example, the financial statements should show depreciation expense for the year, the cost and book value for major classes of plant assets, and the depreciation method(s) used. Evidence concerning these matters is acquired through the substantive tests described in the preceding sections.

Property pledged as security for loans should be disclosed. Information on pledging may be obtained from reviewing the minutes and long-term contractual

agreements, confirming debt agreements, and making inquiries of management. The appropriateness of the client's disclosures related to assets under lease can be determined by recourse to the authoritative accounting pronouncements and the related lease agreements.

### LEARNING CHECK

- 17-1 Describe the nature of the investing and financing cycles and identify the major classes of transactions in the cycle.
- 17-2 Identify three questions that the auditor wants to obtain answers to, and explain why they are important to developing an audit strategy for investing and financing activities.
- 17-3 Compare and contrast the importance of investing and financing activities for the average company in the hotel industry versus the average company involved in computer assembly.
- 17-4 a. State the audit objectives for each management assertion that pertains to the audit of plant assets.
  - b. How would the audit objectives for plant assets compare with audit objectives for investments in natural resources or intangible assets?
- 17-5 a. Identify three analytical procedures that an auditor might perform with respect to plant assets and explain how they might assist in identifying potential misstatements.
  - Discuss the factors that would influence the auditor's consideration of inherent risk for plant assets.
  - c. What is the relationship between internal control in the expenditure cycle and plant assets? What specific controls might apply to plant assets that might not apply to routine expenditures?
- 17-6 a. Contrast the auditor's responsibilities in verifying the beginning plant asset balance between a first time and a repeat audit engagement.
  - Identify the substantive tests of plant assets that apply to three or more assertions.
- 17-7 Distinguish among the following substantive tests of plant assets and indicate the assertions to which each test pertains:
  - Apply analytical procedures.
  - b. Inspect plant assets.
  - c. Examine title documents and lease contracts.
  - d. Vouch plant asset additions.
- 17-8 What procedures may be helpful in determining whether all retirements of plant assets have been recorded?
- 17-9 a. What factors should the auditor consider in reviewing depreciation entries and computations?
  - b. What factors should the auditor consider in determining whether the value of assets has been impaired?

### **KEY TERMS**

Acquiring fixed assets, p. 809 Depreciation expense, p. 809 Disposals of fixed assets, p. 809 Financing activities, p. 807 Investing activities, p. 806 Plant assets, p. 807 Repair and maintenance transactions, p. 809

### THE FINANCING CYCLE

Significant investing transactions are usually accompanied by significant financing transactions. The **financing cycle** includes two major transaction classes as follows:

- Long-term debt transactions include borrowings from bonds, mortgages, notes, and loans, and the related principal and interest payments.
- Stockholders' equity transactions include the issuance and redemption of preferred and common stock, treasury stock transactions, and dividend payments.

Bond and common stock issues typically represent the primary sources of capital funds. Accordingly, attention is focused primarily on these two sources of financing.

The financing cycle interfaces with the expenditure cycle when cash is disbursed for bond interest, the redemption of bonds, cash dividends, and the purchase of treasury stock. The accounts used in recording financing cycle transactions include:

LONG-TERM DEBT TRANSACTIONS	STOCKHOLDERS' EQUITY TRANSACTIONS					
Bonds, Mortgages, Notes, and Loans	Preferred Stock					
Payable	Common Stock					
Bond Premium (Discount)	Treasury Stock					
Interest Payable	Paid-in Capital					
Interest Expense	Retained Earnings					
Gain (Loss) on Retirement of Bonds	Dividends					
	Dividends Payable					

### **AUDIT OBJECTIVES**

For each of the five categories of financial statement assertions, Figure 17-7 lists a number of specific account balance audit objectives pertaining to accounts affected by financing transactions outlined above. Considerations and procedures relevant to meeting these objectives are explained in the following sections.

### **ANALYTICAL PROCEDURES**

Given that the auditor understands the entity's investing activities and the nature of the business, the entity's financing activities should be predictable. Figure 17-8 presents some example analytical procedures along with an explanation of the problems that they might identify. These analytical procedures provide indicators of the entity's need for financing, its ability to service debt, and the reasonableness of interest costs (including both interest expense and capitalized interest).

### INHERENT RISK

The risk of misstatements in executing and recording financing cycle transactions is usually moderate. The major risk is associated with the completeness assertion. These risks involve the usual risks of unrecorded liabilities along with the use of variable interest entities for off-balance sheet financing (both are completeness assertion problems). Another significant inherent risk relates to equity instruments that behave like debt. These should not be classified as shareholders' equity

### **Audit Decision 7**

■ How are specific audit objectives developed for long-term debt and share-holders' equity in the financing cycle?

### **Audit Decision 8**

■ What audit planning decisions should be made when developing an audit program for the financing cycle?

Figure 17-7 ■ Selected Specific Audit Objectives for the Financing Cycle (Debt and Equity)

### Specific Audit Objectives

### **Transaction Objectives**

Occurrence. Recorded debt (EO1), interest cost (EO2), and equity (EO3) represent transactions that occurred during the year.

Completeness. All debt (C1) and interest costs incurred (C2) and equity transactions (C3) that occurred during the period were recorded.

Accuracy. Debt (VA1), interest costs (VA2), and equity transactions (VA3) transactions are accurately valued using GAAP and correctly journalized, summarized, and posted.

Cutoff. All debt (EO1 and C1), interest cost (EO2 and C2), and equity transactions (EO3 and C3) have been recorded in the correct accounting period.

Classification. All debt (PD1), interest cost (PD2), and equity transactions (PD3) have been recorded in the proper accounts.

### **Balance Objectives**

Existence. Recorded debt (EO4) and equity (EO5) exist at the balance sheet date.

Completeness. All debt (C4) and equity (C5) is recorded at the balance sheet date.

**Rights and Obligations.** All recorded debt balances are the obligations of the entity (RO1), and equity balances represent owner's claims on the reporting entity's assets (RO2).

Valuation and Allocation. Debt (VA4) and equity (VA5) balances are properly valued in accordance with GAAP.

### **Disclosure Objectives**

Occurrence and Rights and Obligations. Debt (PD4) and equity (PD8) disclosures have occurred and pertain to the entity.

Completeness. All debt (PD5) and equity (PD9) disclosures that should have been included in the financial statements have been included.

Classification and Understandability. All debt (PD6) and equity (PD10) information is appropriately presented and described and information in disclosures is clearly expressed.

Accuracy and Valuation. Debt (PD7) and equity (PD11) information is disclosed accurately and at appropriate amounts.

in the financial statements. In many companies, these debt and equity transactions occur infrequently. In addition, board of director authorizations are required for most transactions, and company officers participate in their execution. The routine transactions in this cycle include the payment of principal and interest (which should be covered by controls in the expenditure cycle) and the payment of dividends (which are often handled by outside agents).

### **CONSIDERATION OF INTERNAL CONTROLS**

The applicability of the internal control components to financing cycle transactions and balances is similar in many respects to that described earlier for the investing cycle. In the control environment, for instance, responsibility for the transactions is usually assigned to the treasurer or chief financial officer who must possess the integrity and competence to perform these duties. Major transactions will require authorization by the board of directors, and the board's audit committee may closely monitor activities and controls in this cycle.

The accounting system element of the information and communication component will generally provide for subsidiary ledgers for both bonds payable and capital stock. These may be maintained by entity personnel or outside agents.

Figure 17-8 Analytical Procedures Commonly Used to Audit the Financing Cycle

Ratio or Other Financial Information	Formula	Audit Significance		
Free Cash Flow	Cash Flow from Operation less Capital Expenditures	Negative free cash flows indicate the need for expected financing to prevent drawing down on cash or investments.		
Interest-Bearing Debt to Total Assets	Interest-Bearing Debt ÷ Total Assets	Provides a reasonableness of the entity's proportion of debt that may be compared with prior years' experience or industry data.		
Shareholders' Equity to Total Assets	Shareholders' Equity ÷ Total Assets	Provides a reasonableness of the entity's proportion of equity that may be compared with prior years' experience or industry data.		
Comparing Return on Assets with the Incre-	Is ROA > the incremental cost of debt?	If a company is able to generate a higher rate of return on assets than its incremental cost of		
mental Cost of Debt	ROA = (Net Income + (Interest × (1- tax rate)))/Average Total Assets	debt, this is a signal that an entity may use debt financing to expand the assets and earnings of the entity.		
Return on Common Equity	(Net Income – Preferred Dividends) ÷ Average Common Shareholders' Equity	Provides a reasonableness test of shareholder's equity given the company's earnings and financing structure.		
Current Portion of Debt and Dividends to Cash Flow from Operations	(Current Portion of Debt + Dividends) ÷ Cash Flow from Operations	A test of the entity's ability to service its financing obligations. Ratios less than 1.0 indicate potential liquidity problems.		
Times Interest Earned	Income before Interest and Income Taxes ÷ (Interest Expense + Capitalized Interest)	A test of the entity's ability to generate earnings to cover cost of debt service. Ratios less than 1.0 indicate that the entity's earnings are insufficien to cover financing costs.		
Interest Expense to Interest-Bearing Debt	(Interest Expense + Capitalized Interest) ÷ Average Interest Bear- ing Debt	A reasonableness test of recorded interest expense that should approximate the entity's average cost of debt capital.		

Applications of each category of control activities can be found in the financing cycle and are commented upon in the next two sections.

### **Common Documents and Records**

Several of the documents described in the investing cycle, such as stock and bond certificates and a bond indenture, are also important in the financing cycle except the perspective is changed from that of the investor to the issuer. As noted above, separate bondholder and stockholder subsidiary ledgers may be maintained. In addition, financing cycle transactions may involve entries in the general journal and cash receipts and disbursements journals for the issuance and retirement of debt and equity securities, the accrual and payment of interest, and the declaration and payment of dividends.