CHAPTER 13

DEVELOPING THE OVERALL AUDIT PLAN AND AUDIT PROGRAM

LEARNING OBJECTIVES

After studying this chapter, you should be able to

- **13-1** Use the five types of audit tests to determine whether financial statements are fairly stated.
- **13-2** Select the appropriate types of audit tests.
- **13-3** Understand how information technology affects audit testing.
- **13-4** Understand the concept of evidence mix and how it should be varied in different circumstances.
- **13-5** Design an audit program.
- **13-6** Compare and contrast transaction-related audit objectives with balance-related and presentation and disclosure-related audit objectives.
- **13-7** Integrate the four phases of the audit process.

How Much And What Kind Of Testing Will Get The Job Done?

Terry Holland and Al Baker have known each other for years. Terry is a partner in the Southern California office of a national accounting firm. Al is an auditing professor at a nearby university. They get together once a month faithfully for lunch, and the conversation always gets around to auditing theory versus practice. Following is their most recent conversation:

PROFESSOR AL: Now that PCAOB standards require the audit of a public company's financial statements and internal control over financial reporting to be integrated, I'm afraid that auditors over rely on tests of controls and perform virtually no testing of details of balances. Given significant time pressures required to complete the testing of controls to comply with PCAOB requirements, firms may take the low-cost approach and reduce substantive testing instead of being concerned enough about audit quality, especially in the audit of the financial statements.

PARTNER TERRY: Auditors must understand internal control in every audit, regardless if the client is publicly traded or not. For all public companies and for nonpublic companies where control risk is assessed below maximum, the auditor will be performing tests of controls. But, don't forget that auditing standards also require that substantive tests be performed in all audits, even audits of public companies. So, while our testing of controls may be extensive, we always perform some amount of substantive tests. We might concentrate on larger items in tests of details of balances. Where risks are high, we pull out all the stops and do a lot of detailed testing.

PROFESSOR AL: That sounds fine, but there are certain things that only detailed testing will find. I'm thinking specifically about misappropriation of assets. I'm sure your clients expect you to find those, but analytical procedures and tests of large items at year-end won't get that job done. What about that?

PARTNER TERRY: Well, Al, our clients also tell us they want our opinion on their financial statements at as low a cost as possible. If we went looking for misappropriation of assets in every audit, our costs would go through the roof. And I'll tell you, the best way for the client to deal with fraud is to have good controls. And, now that we must audit internal control over financial reporting in larger public company audits, we conduct tests of controls that should address the risk of material misstatements due to misappropriations of assets.

PROFESSOR AL: I'm not convinced. I'm concerned about the reduction in testing to search for errors as well as fraud. It seems to me you guys are taking the auditing standards requirements and figuring out how to audit so efficiently that you're not allowing any slack in the process. I think you're creeping more and more toward being an insurer rather than an assurer of the financial statements.

PARTNER TERRY: What do you mean, Al? I don't understand your theory at all.

PROFESSOR AL: Well, you guys are counting on most of your clients not having misstated financial statements, doing minimal audit work at relatively high fees, and then banking on the fact that you'll be able to absorb the cost of any damages you suffer from bad audit opinions.

PARTNER TERRY: Oh come on, Al, sitting in this ivory tower of yours has turned you into a cynic. I hope you don't talk to your students this way. Auditors do a terrific job, and there is tremendous focus on the auditing profession right now. We want people to come into the profession with a positive attitude. Let's talk about something else. Say, I believe it's your turn to pay.

This chapter deals with the eighth and last step in the planning phase of an audit. This critical step establishes the audit strategy and entire audit program the auditor plans to follow, including all audit procedures, sample sizes, items to select, and timing. The chapter-opening example deals with the importance of making correct decisions in forming the overall audit strategy and developing a detailed audit program, considering both the effectiveness of evidence and audit efficiency.

First, the overall audit strategy is discussed, which means selecting a mix of five types of tests that will result in an effective and efficient audit. This topic includes discussion of the trade-offs among the types of tests, including consideration of the cost of each type. After deciding on the most cost-effective mix of the types of tests, the auditor designs a detailed audit program. Later in the chapter, we'll address how phase I, which includes all of the audit planning steps, relates to the other three phases of the audit.

TYPES OF TESTS

OBJECTIVE 13-1

Use the five types of audit tests to determine whether financial statements are fairly stated.

In developing an overall audit strategy, auditors use five **types of tests** to determine whether financial statements are fairly stated. Auditors use risk assessment procedures to assess the risk of material misstatement, represented by the combination of inherent risk and control risk as described in Chapters 8 and 9. The other four types of tests represent **further audit procedures** performed in response to the risks identified. Each audit procedure falls into one, and sometimes more than one, of these five categories.

Figure 13-1 shows the relationship of the four types of further audit procedures to the audit risk model. As Figure 13-1 illustrates, tests of controls are performed to support a reduced assessment of control risk, while auditors use analytical procedures and tests of details of balances to satisfy planned detection risk. Substantive tests of transactions affect both control risk and planned detection risk, because they test the effectiveness of internal controls and the dollar amounts of transactions.

Risk Assessment Procedures

Auditing standards require the auditor to obtain an understanding of the entity and its environment, including its internal control, to assess the risk of material misstatement in the client's financial statements. Chapter 8 described how the auditor performs procedures to understand the client's business and industry to assess the risk of material misstatement. Chapter 9 further described how auditors perform procedures to assess inherent risk and control risk, while Chapter 10 illustrated how auditors perform procedures to obtain an understanding of internal control to assess control risk. Collectively, procedures performed to obtain an understanding of the entity and its environment, including internal controls, represent the auditor's risk assessment procedures.

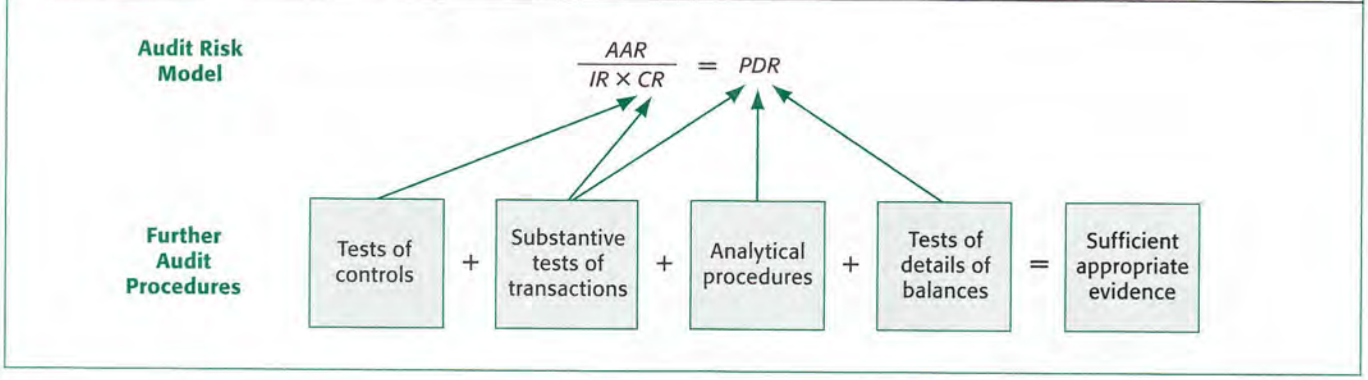
Risk assessment procedures are performed to assess the risk of material misstatement in the financial statements. The auditor performs tests of controls, substantive tests of transactions, analytical procedures, and tests of details of balances in response to the auditor's assessment of the risk of material misstatements. The combination of these four types of further audit procedures provides the basis for the auditor's opinion, as illustrated by Figure 13-1.

A major part of the auditor's risk assessment procedures are done to obtain an understanding of internal control. **Procedures to obtain an understanding of internal control** were studied in Chapter 10 and focus on both the *design* and *implementation* of internal control and are used to assess control risk for each transaction-related audit objective.

Tests of Controls

The auditor's understanding of internal control is used to assess control risk for each transaction-related audit objective. Examples are assessing the accuracy objective for sales transactions as low and the occurrence objective as moderate. When control policies and procedures are believed to be effectively designed, the auditor assesses control risk at a level that reflects the relative effectiveness of those controls. To obtain sufficient appropriate evidence to support that assessment, the auditor performs **tests of controls**.

FIGURE 13-1 Further Audit Procedures and the Audit Risk Model



Tests of controls, either manual or automated, may include the following types of evidence. (Note that the first three procedures are the same as those used to obtain an understanding of internal control.)

- Make inquiries of appropriate client personnel
- Examine documents, records, and reports
- Observe control-related activities
- Reperform client procedures

Auditors perform a system walkthrough as part of procedures to obtain an understanding to help them determine whether controls are in place. The walkthrough is normally applied to one or a few transactions and follows that transaction through the entire process. For example, the auditor may select one sales transaction for a system walkthrough of the credit approval process, then follow the credit approval process from initiation of the sales transaction through the granting of credit.

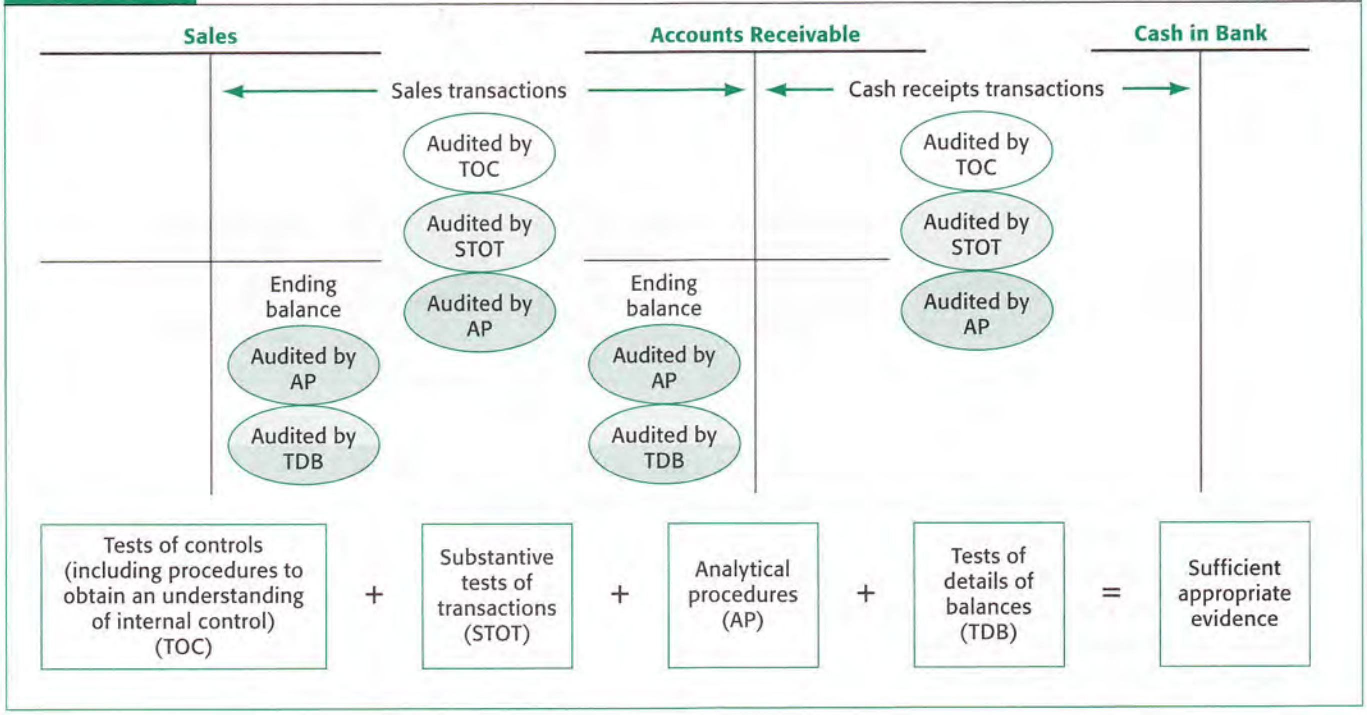
Tests of controls are also used to determine whether these controls are effective and usually involve testing a sample of transactions. As a test of the operating effectiveness of the credit approval process, for example, the auditor might examine a sample of 50 sales transactions from throughout the year to determine whether credit was granted before the shipment of goods. Procedures to obtain an understanding of internal control generally do not provide sufficient appropriate evidence that a control is operating effectively. An exception may apply for automated controls because of their consistent performance. The auditor's procedures to determine whether the automated control has been implemented may also serve as the test of that control, if the auditor determines there is minimal risk that the automated control has been changed since the understanding was obtained. Then, no additional tests of controls would be required. The amount of additional evidence required for tests of controls depends on two things:

1. The extent of evidence obtained in gaining the understanding of internal control
2. The planned reduction in control risk

Figure 13-2 (p. 424) shows the role of tests of controls in the audit of the sales and collection cycle relative to other tests performed to provide sufficient appropriate evidence for the auditor's opinion. Note the unshaded circles with the words "Audited by TOC." For simplicity, we make two assumptions: Only sales and cash receipts transactions and three general ledger balances make up the sales and collection cycle and the beginning balances in cash and accounts receivable were audited in the previous year and are considered correct.

If auditors verify that sales and cash receipts transactions are correctly recorded in the accounting records and posted to the general ledger, they can conclude that the ending balances in accounts receivable and sales are correct. (Cash disbursements transactions will have to be audited before the auditor can reach a conclusion about the

FIGURE 13-2 **Role of Audit Tests in the Audit of the Sales and Collection Cycle**



ending balance in the cash account.) One way the auditor can verify recording of transactions is to perform tests of controls. If controls are in place over sales and cash receipts transactions, the auditor can perform tests of controls to determine whether the six transaction-related audit objectives are being met for that cycle. Substantive tests of transactions, which we will examine in the next section, also affect audit assurance for sales and cash receipts transactions.

To illustrate typical tests of controls, let's return to the control risk matrix for Hillsburg Hardware Co. in Figure 10-5 (p. 326). For each of the 11 controls included in Figure 10-5, Table 13-1 identifies a test of control that might be performed to test its effectiveness.

Substantive Tests of Transactions

Substantive tests are procedures designed to test for dollar misstatements (often called *monetary misstatements*) that directly affect the correctness of financial statement balances. Auditors rely on three types of substantive tests: substantive tests of transactions, substantive analytical procedures, and tests of details of balances.

Substantive tests of transactions are used to determine whether all six transaction-related audit objectives have been satisfied for each class of transactions. Two of those objectives for sales transactions are recorded sales transactions exist (occurrence objective) and existing sales transactions are recorded (completeness objective). See Chapter 6, pages 177–179 for the six transaction-related audit objectives.

When auditors are confident that all transactions were correctly recorded in the journals and correctly posted, considering all six transaction-related audit objectives, they can be confident that general ledger totals are correct.

Figure 13-2 illustrates the role of substantive tests of transactions in the audit of the sales and collection cycle by lightly shaded circles with the words "Audited by STOT." Observe that both tests of controls and substantive tests of transactions are performed for transactions in the cycle, not on the ending account balances. The auditor verifies the recording and summarizing of sales and cash receipts transactions by performing substantive tests of transactions. Figure 13-2 shows one set of tests for sales and another for cash receipts.

TABLE 13-1 Illustration of Tests of Controls

Illustrative Key Controls	Typical Tests of Controls
Credit is approved automatically by the computer by comparison to authorized credit limits (C1).	Examine a sample of sales invoices and compare customer order to authorized credit limit (reperformance).
Recorded sales are supported by authorized shipping documents and approved customer orders (C2).	Examine a sample of duplicate sales invoices to determine that each one is supported by an authorized shipping document and approved customer order (inspection).
Separation of duties exists among billing, recording of sales, and handling of cash receipts (C3).	Observe whether personnel responsible for handling cash have no accounting responsibilities and inquire as to their duties (observation and inquiry).
Shipping documents are electronically forwarded to billing daily and are billed the subsequent day (C4).	Observe whether shipping documents are forwarded daily to billing and observe when they are billed (observation).
Shipping documents are prenumbered and accounted for weekly (C5).	Account for a sequence of shipping documents and trace each to the sales journal (inspection and reperformance).
Batch totals of quantities shipped are compared with quantities billed (C6).	Examine a sample of daily batches, recalculate the shipping quantities, and trace totals to reconciliation with input reports (reperformance).
Unit selling prices are obtained from the price list master file of approved prices (C7).	Examine a sample of sales invoices and agree prices to authorized computer price list. Review changes to price file throughout the year for proper approval (reperformance and inspection).
Sales transactions are internally verified (C8).	Examine documents for internal verification (inspection).
Statements are mailed to customers each month (C9).	Observe whether statements are mailed for 1 month and inquire about who is responsible for mailing the statements (observation and inquiry).
Computer automatically posts transactions to the accounts receivable subsidiary records and to the general ledger (C10).	Use audit software to trace postings from the batch of sales transactions to the subsidiary records and general ledger (reperformance).
Accounts receivable master file is reconciled to the general ledger on a monthly basis (C11).	Examine evidence of reconciliation for test month, and test accuracy of reconciliation (inspection and reperformance).

Auditors can perform tests of controls separately from all other tests, but it's often more efficient to do them at the same time as substantive tests of transactions. For example, auditors can usually apply tests of controls involving inspection and reperformance to the same transactions tested for monetary misstatements. (Reperformance simultaneously provides evidence about both controls and monetary correctness.) In the rest of this book, we will assume that tests of controls and substantive tests of transactions are done at the same time.

Analytical Procedures

As we first discussed in Chapter 7, **analytical procedures** involve comparisons of recorded amounts to expectations developed by the auditor. Auditing standards require that they be done during planning and completing the audit. Although not required, analytical procedures may also be performed to audit an account balance. The two most important purposes of analytical procedures in the audit of account balances are to:

1. Indicate possible misstatements in the financial statements
2. Provide substantive evidence

Analytical procedures done during planning typically differ from those done in the testing phase. Even if, for example, auditors calculate the gross margin during planning, they probably do it using interim data. Later, during the tests of the ending balances, they will recalculate the ratio using full-year data. If auditors believe that analytical procedures indicate a reasonable possibility of misstatement, they may perform additional analytical procedures or decide to modify tests of details of balances.

When the auditor develops expectations using analytical procedures and concludes that the client's ending balances in certain accounts appear reasonable, certain tests of details of balances may be eliminated or sample sizes reduced. Auditing standards state that analytical procedures are a type of substantive test (referred to as substantive analytical procedures), when they are performed to provide evidence about an account balance. The extent to which auditors may be willing to rely on substantive analytical procedures in support of an account balance depends on several factors, including the precision of the expectation developed by the auditor, materiality, and the risk of material misstatement.

Figure 13-2 (p. 424) illustrates the role of substantive analytical procedures in the audit of the sales and collection cycle by the dark shaded circles with the words "Audited by AP." Observe that the auditor performs substantive analytical procedures on sales and cash receipts transactions, as well as on the ending balances of the accounts in the cycle.

Tests of Details of Balances

Tests of details of balances focus on the ending general ledger balances for both balance sheet and income statement accounts. The primary emphasis in most tests of details of balances is on the balance sheet. Examples include confirmation of customer balances for accounts receivable, physical examination of inventory, and examination of vendors' statements for accounts payable. Tests of ending balances are essential because the evidence is usually obtained from a source independent of the client, which is considered highly reliable. Much like for transactions, the auditor's tests of details of balances must satisfy all balance-related audit objectives for each significant balance sheet account. These objectives were introduced in Chapter 6 and are shown on pages 179–182.

Figure 13-2 illustrates the role of tests of details of balances by the circles with half dark and half light shading and the words "Audited by TDB." Auditors perform detailed tests of the ending balances for sales and accounts receivable, including procedures such as confirmation of account receivable balances and sales cutoff tests. The extent of these tests depends on the results of tests of controls, substantive tests of transactions, and substantive analytical procedures for these accounts.

Tests of details of balances help establish the monetary correctness of the accounts they relate to and therefore are substantive tests. For example, confirmations test for monetary misstatements in accounts receivable and are therefore substantive tests. Similarly, counts of inventory and cash on hand are also substantive tests.

TABLE 13-2 Relationship Between Further Audit Procedures and Evidence

Further Audit Procedures	Type of Evidence: Physical Examination	Confirmation	Inspection	Observation	Inquiries of the Client	Reperformance	Analytical Procedures	Recalculation
Tests of controls (including procedures to obtain an understanding of internal control)			√	√	√	√		
Substantive tests of transactions			√		√	√		√
Analytical procedures					√		√	
Tests of details of balances	√	√	√		√	√		√

Summary of Types of Tests

Figure 13-2 summarizes how auditors respond to the risks of material misstatements identified through risk assessment procedures by using the four types of further audit procedures to obtain audit assurance in the audit of the sales and collection cycle. Tests of controls help auditors evaluate whether controls over transactions in the cycle are sufficiently effective to support the reduced assessment of control risk, and thereby allow reduced substantive testing. Tests of controls also form the basis for the auditor's report on internal control over financial reporting for larger public companies. Substantive tests of transactions are used to verify transactions recorded in the journals and posted in the general ledger. Analytical procedures emphasize the overall reasonableness of transactions and the general ledger balances. Tests of details of balances emphasize the ending balances in the general ledger.

By combining the types of audit tests shown in Figure 13-2, the auditor obtains a higher overall assurance for transactions and accounts in the sales and collection cycle than the assurance obtained from any one test. To increase overall assurance for the cycle, the auditor can increase the assurance obtained from any one of the tests.

SELECTING WHICH TYPES OF TESTS TO PERFORM

OBJECTIVE 13-2

Select the appropriate types of audit tests.

Typically, auditors use all five types of tests when performing an audit of the financial statements, but certain types may be emphasized, depending on the circumstances. Recall that risk assessment procedures are required in all audits to assess the risk of material misstatement while the other four types of tests are performed in response to the risks identified to provide the basis for the auditor's opinion. Note also that only risk assessment procedures, especially procedures to obtain an understanding of controls, and tests of controls are performed in an audit of internal control over financial reporting.

Several factors influence the auditor's choice of the types of tests to select, including the availability of the eight types of evidence, the relative costs of each type of test, the effectiveness of internal controls, and inherent risks. Only the first two are discussed further because the last two were discussed in earlier chapters.

Availability of Types of Evidence for Further Audit Procedures

Each of the four types of further audit procedures involves only certain types of evidence (confirmation, inspection, and so forth). Table 13-2 summarizes the relationship between further audit procedures and types of evidence. We can make several observations about the table:

- More types of evidence, six in total, are used for tests of details of balances than for any other type of test.
- Only tests of details of balances involve physical examination and confirmation.
- Inquiries of the client are made for every type of test.
- Inspection is used in every type of test except analytical procedures.
- Reperformance is used in every type of test except analytical procedures. Auditors may reperform a control as part of a transaction walkthrough or to test a control that is not supported by sufficient documentary evidence.
- Recalculation is used to verify the mathematical accuracy of transactions when performing substantive test of transactions and account balances when performing tests of details of balances.

Relative Costs

When auditors must decide which type of test to select for obtaining sufficient appropriate evidence, the cost of the evidence is an important consideration. The types of tests are listed below in order of increasing cost:

- Analytical procedures
- Risk assessment procedures, including procedures to obtain an understanding of internal control
- Tests of controls
- Substantive tests of transactions
- Tests of details of balances

Analytical procedures are the least costly because of the relative ease of making calculations and comparisons. Often, considerable information about potential misstatements can be obtained by simply comparing two or three numbers.

Risk assessment procedures, including procedures to obtain an understanding of internal control, are not as costly as other audit tests because auditors can easily make inquiries and observations and perform planning analytical procedures. Also, examining such things as documents summarizing the client's business operations and processes and management and governance structure are relatively cheaper than other audit tests.

Because tests of controls also involve inquiry, observation, and inspection, their relative costs are also low compared to substantive tests. However, tests of controls are more costly relative to the auditor's risk assessment procedures due to a greater extent of testing required to obtain evidence that a control is operating effectively, especially when those tests of controls involve reperformance. Often, auditors can perform a large number of tests of controls quickly using audit software. Such software can test controls in clients' computerized accounting systems, such as in computerized accounts receivable systems that automatically authorize sales to existing customers by comparing the proposed sales amount and existing accounts receivable balance with the customer's credit limit.

Substantive tests of transactions cost more than tests of controls that do not include reperformance because the former often require recalculations and tracings. In a computerized environment, however, the auditor can often perform substantive tests of transactions quickly for a large sample of transactions.

Tests of details of balances almost always cost considerably more than any of the other types of procedures because of the cost of procedures such as sending confirmations and counting inventories. Because of the high cost of tests of details of balances, auditors usually try to plan the audit to minimize their use.

Naturally, the cost of each type of evidence varies in different situations. For example, the cost of an auditor's test-counting inventory (a substantive test of the details of the inventory balance) often depends on the type and dollar value of the inventory, its location, and the number of different items.

Relationship Between Tests of Controls and Substantive Tests

To better understand tests of controls and substantive tests, let's examine how they differ. An exception in a test of control only *indicates* the likelihood of misstatements affecting the dollar value of the financial statements, whereas an exception in a substantive test of transactions or a test of details of balances is a financial statement misstatement. Exceptions in tests of controls are called *control test deviations.*

From Chapter 10, you may recall the three levels of control deficiencies: deficiencies, significant deficiencies, and material weaknesses. Auditors are most likely to believe material dollar misstatements exist in the financial statements when control test deviations are considered to be significant deficiencies or material weaknesses. Auditors should then perform substantive tests of transactions or tests of details of balances to determine whether material dollar misstatements have actually occurred.

Assume that the client's controls require an independent clerk to verify the quantity, price, and extension of each sales invoice, after which the clerk must initial the duplicate invoice to indicate performance. A test of control audit procedure is to inspect a sample of duplicate sales invoices for the initials of the person who verified the information. If a significant number of documents lack initials, the auditor should consider implications for the audit of internal control over financial reporting and follow up with substantive tests for the financial statement audit. This can be done by extending tests of duplicate sales invoices to include verifying prices, extensions, and footings (substantive tests of transactions) or by increasing the sample size for the confirmation of accounts receivable (substantive test of details of balances). Even though the control is not operating effectively, the invoices may still be correct, especially if the person originally preparing the sales invoices did a conscientious and competent job.

On the other hand, if no documents or only a few of them are missing initials, the control will be considered effective and the auditor can therefore reduce substantive tests of transactions and tests of details of balances. However, some reperformance and recalculation substantive tests are still necessary to provide the auditor assurance that the clerk did not initial documents without actually performing the control procedure or performed it carelessly. Because of the need to complete some reperformance and recalculation tests, many auditors perform them as a part of the original tests of controls. Others wait until they know the results of the tests of controls and then determine the total sample size needed.

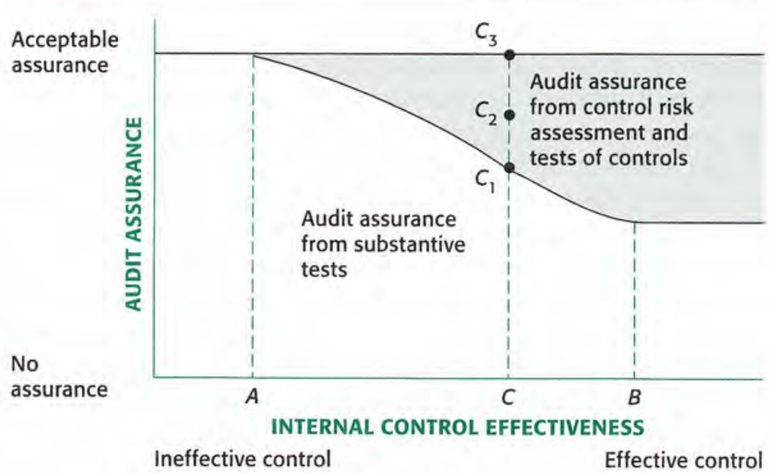
Relationship Between Analytical Procedures and Substantive Tests

Like tests of controls, analytical procedures only *indicate* the likelihood of misstatements affecting the dollar value of the financial statements. Unusual fluctuations in the relationships of an account to other accounts, or to nonfinancial information, may indicate an increased likelihood that material misstatements exist without necessarily providing direct evidence of a material misstatement. When analytical procedures identify unusual fluctuations, auditors should perform substantive tests of transactions or tests of details of balances to determine whether dollar misstatements have actually occurred. If the auditor performs substantive analytical procedures and believes that the likelihood of material misstatement is low, other substantive tests can be reduced. For accounts with small balances and only minimal potential for material misstatements, such as many supplies and prepaid expense accounts, auditors often limit their tests to substantive analytical procedures if they conclude the accounts are reasonably stated.

Trade-Off Between Tests of Controls and Substantive Tests

There is a trade-off between tests of controls and substantive tests. During planning, auditors decide whether to assess control risk below the maximum. When they do, they must then perform tests of controls to determine whether the assessed level of control risk is supported. (They must always perform test of controls in an audit of internal control over financial reporting.) If tests of controls support the control risk assessment, planned detection risk in the audit risk model is increased, and planned substantive tests can therefore be reduced. Figure 13-3 shows the relationship between substantive tests and control risk assessment (including tests of controls) at differing levels of internal control effectiveness.

FIGURE 13-3 **Audit Assurance from Substantive Tests and Tests of Controls at Different Levels of Internal Control Effectiveness**



C_3 No reliance on controls.
C_2 Some reliance on controls.
C_1 Maximum reliance on controls.

The shaded area in Figure 13-3 is the maximum assurance obtainable from control risk assessment and tests of controls. At any point to the left of point *A*, assessed control risk is 1.0 because the auditor initially evaluated internal controls as ineffective based on the performance of risk assessment procedures. Any point to the right of point *B* results in no further reduction of control risk because the CPA firm has established a minimum assessed control risk. Notice in Figure 13-3 that regardless of the level of audit assurance obtained from control risk assessment and tests of controls, an audit of financial statements always requires some substantive procedures. Because the audit of financial statements and the audit of internal control over financial reporting are integrated, accelerated filer public company audits will most likely be represented by point *B*.

The auditor's understanding of internal control performed as part of risk assessment procedures provides the basis for the auditor's initial assessment of control risk. Assuming that the auditor determines that the design of internal control is effective and the controls are implemented, the auditor selects a point within the shaded area of Figure 13-3 that is consistent with the assessed control risk the auditor decides to support with tests of controls. Assume the auditor contends that internal control effectiveness is at point *C*. Tests of controls at the C_1 level will be extensive to support the low assessment of control risk. The auditor may then determine through the performance of tests of controls that the initial low assessment of control risk at point *C* is not supported and that internal control is not operating effectively. Then, the auditor's revised control risk assessment would be at the maximum (point C_3) and audit assurance will be obtained from substantive tests. Any point between the two, such as C_2, represents situations where the audit assurance obtained from tests of controls is less than the maximum level of assurance represented by point C_1. If C_2 is selected, the audit assurance from tests of controls is $C_3 - C_2$ and from substantive tests is $C - C_2$. The auditor will likely select C_1, C_2, or C_3 based on the relative cost of tests of controls and substantive tests.

IMPACT OF INFORMATION TECHNOLOGY ON AUDIT TESTING

OBJECTIVE 13-3

Understand how information technology affects audit testing.

Auditing standards provide guidance for auditors of entities that transmit, process, maintain, or access significant information electronically. Examples of electronic evidence include records of electronic fund transfers and purchase orders transmitted through electronic data interchange (EDI). Evidence of the performance of automated controls, such as the computer's comparison of proposed sales orders to customer credit limits, may also only be in electronic form.

The standards recognize that when a significant amount of audit evidence exists in electronic form, it may not be practical or possible to reduce detection risk to an acceptable level by performing only substantive tests. For example, the potential for improper initiation or alteration of information may be greater if information is maintained only in electronic form. In these circumstances, the auditor should perform tests of controls to gather evidence in support of an assessed level of control risk below maximum for the affected financial statement assertions. Although some substantive tests are still required, the auditor can significantly reduce substantive tests if the results of tests of controls support the effectiveness of controls. In the audit of a larger public company, computer-performed controls (these are called automated controls) must be tested if the auditor considers them to be key controls for reducing the likelihood of material misstatements in the financial statements.

Because of the inherent consistency of IT processing, however, the auditor may be able to reduce the extent of testing of an automated control. For example, a software-based control is almost certain to function consistently unless the program is changed. Once auditors determine an automated control is functioning properly, they can focus subsequent tests on assessing whether any changes have occurred that will limit the effectiveness of the control. Such tests might include determining whether any changes have occurred to the program and whether these changes were properly authorized and tested prior to implementation. This approach leads to significant audit efficiencies when the auditor determines that automated controls tested in the prior year's audit have not been changed and continue to be subject to effective general controls.

To test automated controls or data, the auditor may need to use computer-assisted audit techniques or use reports produced by IT to test the operating effectiveness of IT general controls, such as program change controls and access controls. In many cases, testing of automated controls may be performed by IT audit specialists. When auditors test manual controls that rely on IT-generated reports, they must consider both the effectiveness of management's review and automated controls over the accuracy of information in the report.

EVIDENCE MIX

OBJECTIVE 13-4

Understand the concept of evidence mix and how it should be varied in different circumstances.

The choice of which types of tests to use and how extensively they need to be performed can vary widely among audits for differing levels of internal control effectiveness and inherent risks. Even within a given audit, variations may occur from cycle to cycle. To obtain sufficient appropriate evidence in response to risks identified through risk assessment procedures, auditors employ a combination of the four remaining types of tests. This combination is often called the **evidence mix**, which is illustrated in Table 13-3 for four different audits. In each case, assume that sufficient appropriate evidence was accumulated. In each audit, you should be able to determine the description of the client from the evidence mix in Table 13-3.

Analysis of Audit 1 This client is a large company with sophisticated internal controls and low inherent risk. Therefore, the auditor performs extensive tests of controls and relies heavily on the client's internal controls to reduce substantive tests. Extensive substantive analytical procedures are also performed to reduce other substantive tests. Substantive tests of transactions and tests of details of balances are therefore minimized. Because of the emphasis on tests of controls and substantive analytical procedures, this audit can be done relatively inexpensively. This audit likely represents the mix of evidence used in the integrated audit of a public company's financial statements and internal control over financial reporting.

Analysis of Audit 2 This company is medium sized, with some controls and a few inherent risks. The auditor has decided to do a medium amount of testing for all types of tests except substantive analytical procedures, which will be done extensively. More extensive testing will be required if specific inherent risks are discovered.

Analysis of Audit 3 This company is medium sized but has few effective controls and significant inherent risks. Perhaps management has decided that better internal controls are not cost effective. Because of the lack of effective internal control, we can

TABLE 13-3 Variations in Evidence Mix

	Tests of Controls	Substantive Tests of Controls	Analytical Procedures	Tests of Details of Balances
Audit 1	E	S	E	S
Audit 2	M	M	E	M
Audit 3	N	E	M	E
Audit 4	M	E	E	E

E = Extensive amount of testing; M = Medium amount of testing; S = Small amount of testing; N = No testing.

assume this company is probably a nonpublic company. No tests of controls are done because reliance on internal controls is inappropriate when controls are insufficient for a nonpublic company. The auditor emphasizes tests of details of balances and substantive tests of transactions, but some substantive analytical procedures are also done. Substantive analytical procedures are usually performed to reduce other substantive tests because they provide evidence about the likelihood of material misstatements. If the auditor already expects to find material misstatements in the account balances, additional analytical procedures are not cost effective. The cost of the audit is likely to be relatively high because of the amount of detailed substantive testing.

Analysis of Audit 4 The original plan on this audit was to follow the approach used in Audit 2. However, the auditor likely found extensive control test deviations and significant misstatements while performing substantive tests of transactions and substantive analytical procedures. Therefore, the auditor concluded that the internal controls were not effective. Extensive tests of details of balances are performed to offset the unacceptable results of the other tests. The cost of this audit is higher because tests of controls and substantive tests of transactions were performed but can not be used to reduce tests of details of balances.

DESIGN OF THE AUDIT PROGRAM

OBJECTIVE 13-5

Design an audit program.

After the auditor uses risk assessment procedures to determine the appropriate emphasis on each of the other four types of tests, the specific audit procedures for each type of test must be designed. These audit procedures are then combined to form the audit program. In most audits, the engagement in-charge auditor recommends the evidence mix to the engagement manager. After the evidence mix is approved, the in-charge prepares the audit program or modifies an existing program to satisfy all audit objectives, considering such things as materiality, evidence mix, inherent risk, control risk, and any identified fraud risks, as well as the need for an integrated audit for larger public companies. The in-charge is also likely to get approval from the manager before performing the audit procedures or delegating their performance to an assistant.

Let's focus on designing audit programs to satisfy transaction-related and balance-related audit objectives. Keep in mind the auditor will also design audit programs to satisfy presentation and disclosure-related audit objectives. In addition to the section of the audit program that contains the risk assessment procedures performed in planning, the audit program for most audits is designed in three additional parts: tests of controls and substantive tests of transactions, substantive analytical procedures, and tests of details of balances.

Each transaction cycle will likely be evaluated using a separate set of sub-audit programs. In the sales and collection cycle, for example, the auditor might use:

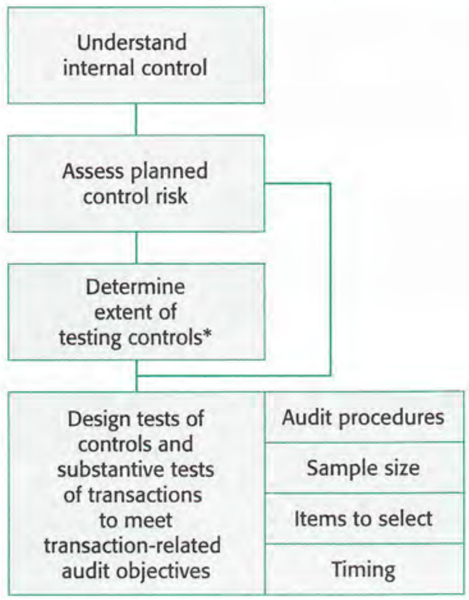
SEC SANCTIONS AUDITOR FOR LACK OF AUDIT PROGRAM

Norman Stumacher was the auditor from April 2001 to February 2005 for Video Without Boundaries (Video), Inc., a consumer electronics company based in Fort Lauderdale, Florida. Video recorded fictitious revenues and assets through improper revenue recognition and other accounting schemes. These methods included recognizing revenue for services that were never provided in return for shares of stock in a company that went bankrupt. Video also recorded revenue for shipments to a distributor's warehouse, although the distributor was not obligated to pay for the products until they were sold to third party customers.

Stumacher did not create any audit programs or other documentation to support his unqualified opinions on Video's financial statements. As a result of his improper professional conduct and violations of Rule 10b-5, Stumacher was prohibited from acting as an accountant before the SEC.

Source: Securities and Exchange Commission Accounting and Auditing Enforcement Release No. 2883, September 23, 2008 (www.sec.gov/litigation).

FIGURE 13-4 **Methodology for Designing Tests of Controls and Substantive Tests of Transactions**



*Extent of testing of controls is determined by planned reliance on controls. For public companies required to have an audit of internal control, testing must be sufficient to issue an opinion on internal control over financial reporting.

- A test of controls and substantive tests of transactions audit program for sales and cash receipts
- A substantive analytical procedures audit program for the entire cycle
- Tests of details of balances audit programs for cash, accounts receivable, bad debt expense, allowance for uncollectible accounts, and miscellaneous accounts receivable

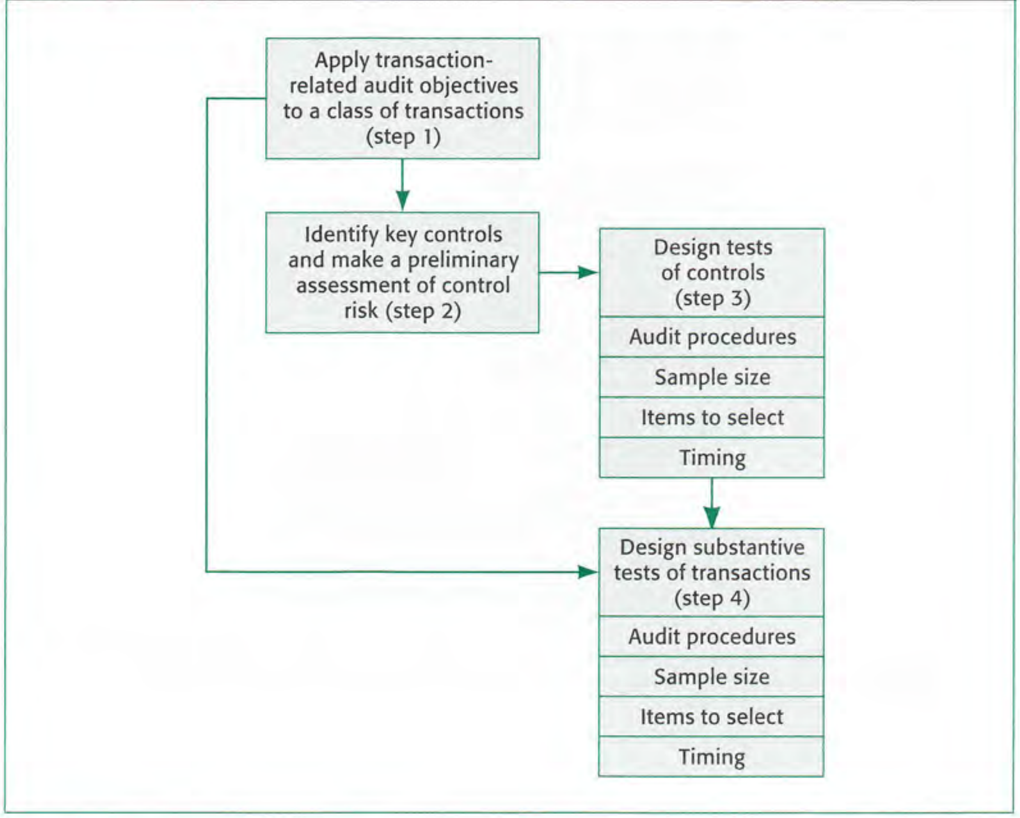
Tests of Controls and Substantive Tests of Transactions

The tests of controls and substantive tests of transactions audit program normally includes a descriptive section documenting the understanding of internal control obtained during the performance of risk assessment procedures. The program is also likely to include a description of the procedures performed to obtain an understanding of internal control and a description of the assessed level of control risk. The auditor uses this information to develop the tests of controls and substantive tests of transactions audit program. Figure 13-4 illustrates the methodology used to design these tests. (We previously discussed the steps in the first three boxes of Figure 13-4 on pages 321–332 of Chapter 10.) The audit procedures include both tests of controls and substantive tests of transactions, which vary depending on assessed control risk. When controls are effective and control risk is assessed as low, auditors put heavy emphasis on tests of controls. Some substantive tests of transactions will also be included. If control risk is assessed at maximum, only substantive tests of transactions will be used, assuming the audit is of a smaller public company or a nonpublic company.

Audit Procedures When designing tests of controls and substantive tests of transactions, auditors emphasize satisfying the transaction-related audit objectives developed in Chapter 6. Auditors follow a four-step approach to reduce assessed control risk.

1. Apply the transaction-related audit objectives to the class of transactions being tested, such as sales.

FIGURE 13-5 Four-Step Approach to Designing Tests of Controls and Substantive Tests of Transactions



2. Identify key controls that should reduce control risk for each transaction-related audit objective.
3. Develop appropriate tests of controls for all internal controls that are used to reduce the preliminary assessment of control risk below maximum (key controls).
4. For potential types of misstatements related to each transaction-related audit objective, design appropriate substantive tests of transactions, considering deficiencies in internal control and expected results of the tests of controls in step 3.

Figure 13-5 summarizes this four-step approach to designing tests of controls and substantive tests of transactions.

Analytical Procedures

Because substantive analytical procedures are relatively inexpensive, many auditors perform them on all audits. Analytical procedures performed during substantive testing, such as for the audit of accounts receivable, are typically more focused and more extensive than those done as part of planning. The auditor is likely to use disaggregated data to increase the precision of the auditor's expectations. During planning, the auditor might calculate the gross margin percentage for total sales, while during substantive testing of accounts receivable, the auditor might calculate gross margin percentage by month or by line of business, or possibly both. Analytical procedures calculated using monthly amounts will typically be more effective in detecting misstatements than those calculated using annual amounts, and comparisons by line of business will usually be more effective than companywide comparisons.

If sales and accounts receivable are based on predictable relationships with non-financial data, the auditor often uses that information for analytical procedures. For example, if revenue billings are based on the number of hours professionals charge to clients, such as in law firms and other organizations that provide services, the auditor can estimate total revenue by multiplying hours billed by the average billing rate.

When the auditor plans to use analytical procedures to provide substantive assurance about an account balance, the data used in the calculations must be considered sufficiently reliable. This is true for all data, especially nonfinancial data. For example, if auditors estimate total revenue using hours billed and the average billing rate, they must be confident that both numbers are reasonably reliable.

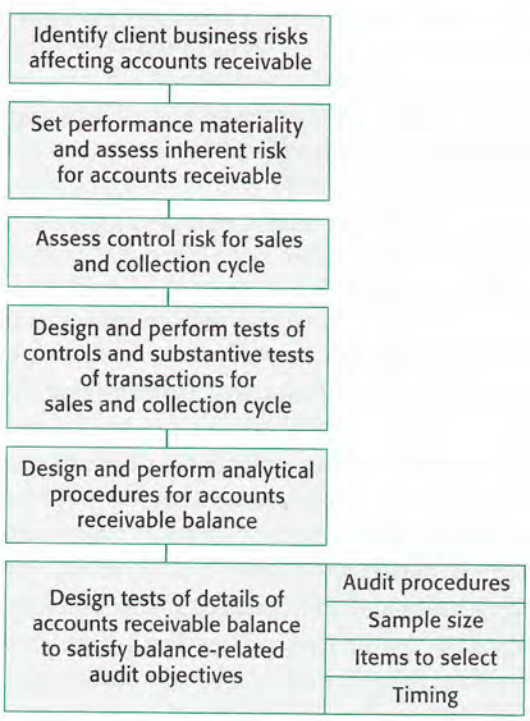
Tests of Details of Balances

To design tests of details of balances audit procedures, auditors use a methodology oriented to the balance-related audit objectives we covered in Chapter 6 (pp. 179–182). If the auditor is verifying accounts receivable, for example, the planned audit procedures must be sufficient to satisfy each of the balance-related audit objectives. In planning tests of details of balances audit procedures to satisfy these objectives, many auditors follow a methodology such as the one shown in Figure 13-6 for accounts receivable. The design of these procedures is normally the most difficult part of the entire planning process because it is subjective and requires considerable professional judgment.

Let's discuss the key decisions in designing tests of details of balances audit procedures as shown in Figure 13-6.

Identify Client Business Risks Affecting Accounts Receivable As part of gaining an understanding of the client's business and industry, the auditor identifies and evaluates significant client business risks to determine whether they result in increased risk of material misstatements in the financial statements. If any of the identified client business risks affect accounts receivable, they should be incorporated in the auditor's evaluation of inherent risk or control risk. These risks will then affect the appropriate extent of evidence.

FIGURE 13-6 **Methodology for Designing Tests of Details of Balances – Accounts Receivable**



CUSTOMIZED RISK-BASED AUDITS LEAD TO BETTER EFFECTIVENESS AND EFFICIENCY

Auditors often assume that the audit is mostly unchanged from the prior year. Audit effectiveness can be compromised by this "same as last year" (SALY) mentality. Instead, auditors should follow risk assessment best practices and start with a premise that some things have changed from the prior year audit. As a result, the first priority of the current year audit is to identify changes and their effect on risk. Auditors should ask questions such as:

- What has *changed* at the entity and its operating environment since the last audit?
- How have inherent risks *changed* as a result of these changes in the entity and operating environment?
- What *changes* in internal control were necessary to address these changes in the environment and inherent risks?

For example, a recessionary economic environment may create inherent risk related to asset valuation for accounts such as inventory, accounts receivable, and other assets. As a result, the company may implement new or revised controls to address these increased risks.

Many firms use standardized audit programs and practice aids provided by external parties. However, in the current audit environment, many audit firms are developing customized, firm-specific audit practice aids that reflect the unique nature of their audit practice. Andrew Prather of audit firm Clark Nuber notes, "We work with a lot of not-for-profit organizations. We wanted a workpaper format that would allow us to build a library of templates specific to our clients." Firms that customize approaches to "own" their audit methodology do so with the expectation that it will ultimately lead to more effective and efficient audits.

Source: Adapted from Michael Ramos, "Risk-based Audit Best Practices," *Journal of Accountancy* (December 2009), pp. 32–37.

Set Performance Materiality and Assess Inherent Risk for Accounts Receivable Auditors must decide the preliminary judgment about materiality for the audit as a whole and then allocate the total to account balances, to establish performance materiality for each significant balance. For a lower materiality level, more testing of details is required, and vice versa. Some auditors allocate performance materiality to individual balance-related audit objectives, but most do not.

Inherent risk is assessed by identifying any aspect of the client's history, environment, or operations that indicates a high likelihood of misstatement in the current year's financial statements. Considerations affecting inherent risk that may apply to accounts receivable include makeup of accounts receivable, nature of the client's business, initial engagement, and other inherent risk factors discussed in Chapter 9. An account balance for which inherent risk has been assessed as high will result in more evidence accumulation than for an account with low inherent risk.

Inherent risk also can be extended to individual balance-related audit objectives. For example, adverse economic conditions in the client's industry may make the auditor conclude that a high risk of uncollectible accounts receivable (realizable value objective) exists. Inherent risk can still be low for all other objectives.

Assess Control Risk for the Sales and Collection Cycle The methodology for evaluating control risk will be applied to both sales and cash receipts in the audit of accounts receivable. Effective controls will reduce control risk and, along with it, the amount of evidence required for substantive tests of transactions and tests of details of balances. Inadequate controls will increase the substantive evidence needed.

Design and Perform Tests of Controls and Substantive Tests of Transactions for the Sales and Collection Cycle Tests of controls and substantive tests of transactions are designed with the expectation that certain results will be obtained. These predicted results affect the design of tests of details of balances. For example, the auditor usually plans to do extensive tests of controls when control risk is assessed as low. This will permit less extensive substantive testing of accounts receivable balances.

Design and Perform Analytical Procedures for Accounts Receivable Balance Auditors perform substantive analytical procedures for an account such as accounts receivable for two purposes: to identify possible misstatements in the account balance and to reduce detailed audit tests. The results of substantive analytical procedures directly affect the extent of tests of details of balances.

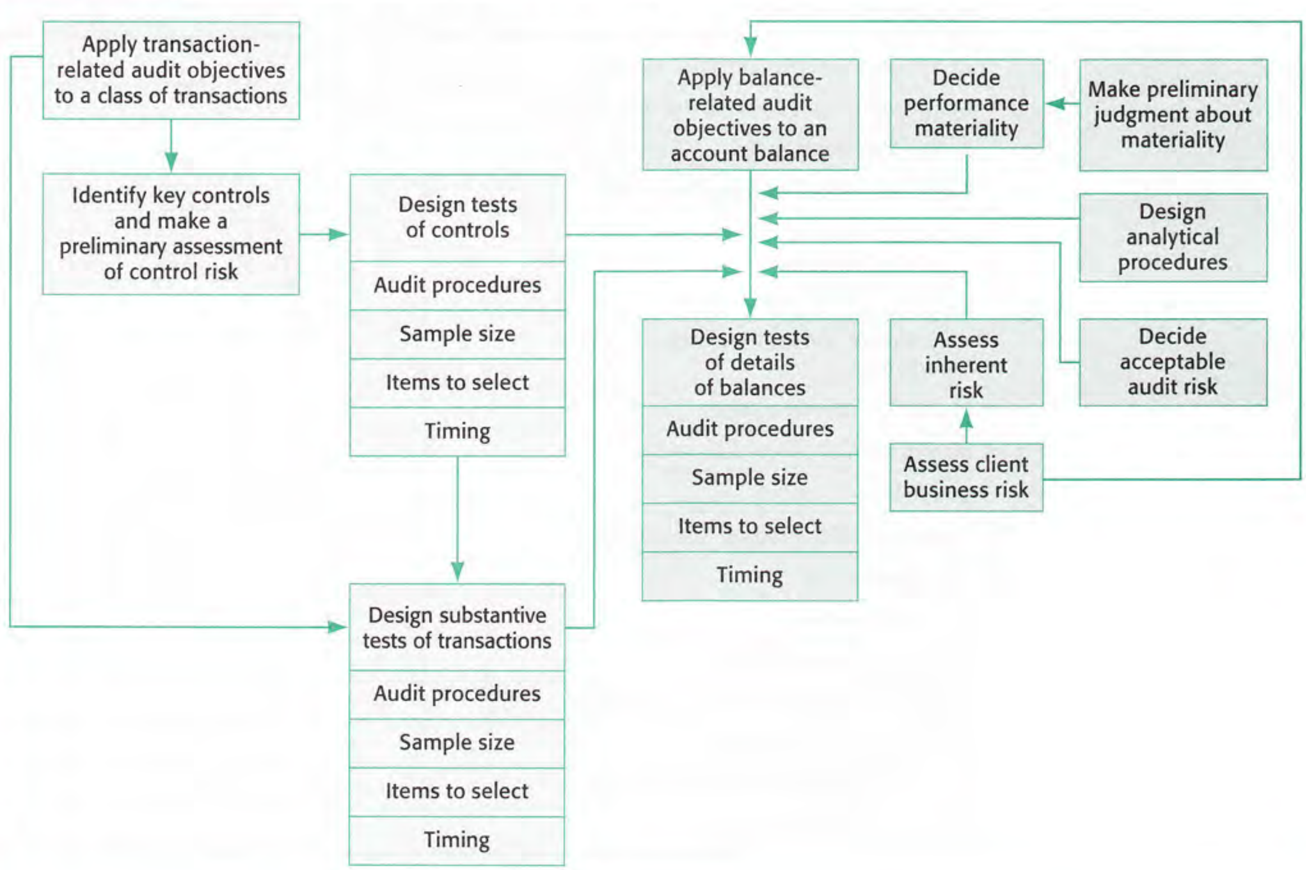
Design Tests of Details of Accounts Receivable Balance to Satisfy Balance-Related Audit Objectives The planned tests of details of balances include audit procedures, sample size, items to select, and timing. Procedures must be selected and designed for each account and each balance-related audit objective within each account.

A difficulty auditors face in designing tests of details of balances is the need to predict the outcome of the tests of controls, substantive tests of transactions, and substantive analytical procedures before they are performed. This is necessary because the auditor should design tests of details of balances during the planning phase, but the appropriate design depends on the outcome of the other tests. In planning tests of details of balances, the auditor usually predicts few or no exceptions will occur in tests of controls, substantive tests of transactions, and substantive analytical procedures. If the results of the tests of controls, substantive tests of transactions, and substantive analytical procedures are *not* consistent with the predictions, auditors will need to change the tests of details of balances as the audit progresses.

Figure 13-7 summarizes the discussion about the approach to designing tests of details of balances applied to accounts receivable. The light shaded boxes on the left side of the figure correspond to the design of tests of controls and substantive tests of transactions, as presented in Figure 13-5 (p. 434). Figure 13-7 builds on Figure 13-5 by also showing how tests of controls and substantive tests of transactions affect the design of the tests of details of balances. Other factors affecting that decision are shown in the darker shaded boxes on the right side of the figure.

One of the most challenging parts of auditing is properly applying the factors that affect tests of details of balances. Each of the factors is subjective. Moreover, the impact

FIGURE 13-7 Approach to Designing Tests of Details of Balances



of each factor on tests of details of balances is equally subjective. For example, if inherent risk is reduced from medium to low, there is agreement that tests of details of balances can be reduced. Auditors need to use considerable professional judgment to decide the specific effects of such a change on audit procedures, sample size, items to select, and timing.

Level of Disaggregation of Planning Activities

The various planning activities we discussed in Chapters 6 through 13 are applied at different levels of disaggregation, depending on the nature of the activity. Figure 13-8 shows the primary planning activities and the levels of disaggregation normally applied. These levels of disaggregation range from the overall audit to the balance-related audit objective for each account. For example, risk assessment procedures related to obtaining background information about the client's business and industry pertain to the overall audit. Auditors will first use that information in assessing acceptable audit risk for the engagement as whole. They will then use information about the client and industry obtained through risk assessment procedures to assess inherent risk for specific audit objectives. As the audit progresses, they will likely use that information when making decisions about tests of details of balances. Similarly, the auditor will first assess the risk of fraud for the overall audit, and later consider whether any fraud risks exist that

FIGURE 13-8 Disaggregation Level to Which Planning Activities Are Applied

	LEVEL OF DISAGGREGATION				
PLANNING ACTIVITY	Overall Audit	Cycle	Account	Transaction-Related Audit Objective	Balance-Related Audit Objective
Accept client and perform initial planning	P				
Understand client's business and industry	P				
Assess client business risk	P				
Gather information to assess fraud risks	P				
Understand internal control:					
Control environment	P				
Risk assessment		P			
Control activities		P			
Information and communication		P			
Monitoring		P			
Identify key internal controls				P	
Identify internal control deficiencies				P	
Design tests of controls				P	
Design substantive tests of transactions				P	
Assess control risk				P	
Assess inherent risk			P		P
Assess acceptable audit risk	P				
Set preliminary judgment about materiality	P				
Set performance materiality			P		
Design substantive analytical procedures			P		P
Design tests of details of balances					P

P = Primary level to which planning activity is applied

TABLE 13-4 **Tests of Details of Balances Audit Program for Accounts Receivable**

				Accounts Receivable Balance-Related Audit Objectives							
Tests of Details of Balances Audit Procedures	**Sample Size for Each Audit Procedure**	**Items to Select from the Population**	**Timing of the Test**	**Detail tie-in**	**Existence**	**Completeness**	**Accuracy**	**Classification**	**Cutoff**	**Realizable value**	**Rights**
1. Obtain an aged list of receivables: trace accounts to the master file, foot schedule, and trace to general ledger	Trace 20 items; foot 2 pages and all subtotals	Random	I	X							
2. Obtain an analysis of the allowance for doubtful accounts and bad debt expense: test accuracy, examine authorization for write-offs, and trace to general ledger.	All	All	Y	X	X	X	X			X	
3. Obtain direct confirmation of accounts receivable and perform alternative procedures for nonresponses.	50	10 largest 40 random	I		X		X	X	X		X
4. Review accounts receivable control account for the period. Investigate the nature of and review support for any large or unusual entries or any entries not arising from normal journal sources. Also investigate any significant increases or decreases in sales toward year-end.	NA	NA	Y		X		X	X	X		X
5. Review receivables for any that have been assigned or discounted.	All	All	Y								X
6. Investigate collectibility of account balances.	NA	NA	Y							X	
7. Review lists of balances for amounts due from related parties or employees, credit balances, and unusual items, as well as notes receivable due after 1 year.	All	All	Y		X			X			
8. Determine that proper cutoff procedures were applied at the balance sheet date to ensure that sales, cash receipts, and credit memos have been recorded in the correct period.	20 transactions for sales and cash receipts; 10 for credit memos	50% before and 50% after year-end	Y						X		

I = Interim; Y = Year-end; NA = Not applicable.

may affect fraud risk assessments for specific accounts and the audit procedures and sample sizes for tests of details of balances for accounts that are affected.

Illustrative Audit Program

Auditing standards require the auditor to use a written audit program. Table 13-4 shows the tests of details of balances segment of an audit program for accounts receivable. The format used relates the audit procedures to the balance-related audit objectives. Notice that most procedures satisfy more than one objective, and that more than one audit procedure is used for each objective. Audit software helps auditors select appropriate audit procedures and organize them into an audit program, considering inherent and control risk and other planning considerations.

Audit procedures can be added or deleted as the auditor deems necessary. For most audit procedures, sample size, items to select, and timing can also be changed.

The audit program in Table 13-4 was developed after consideration of all factors affecting tests of details of balances and is based on several assumptions about inherent risk, control risk, and the results of tests of controls, substantive tests of transactions, and substantive analytical procedures. As indicated, if those assumptions are materially incorrect, the planned audit program will likely need revision. For example, analytical procedures performed near the end of the audit can indicate potential misstatements for several balance-related audit objectives, requiring a revision of the audit plan to gather additional evidence.

Relationship of Transaction-Related Audit Objectives to Balance-Related and Presentation and Disclosure-Related Audit Objectives

OBJECTIVE 13-6

Compare and contrast transaction-related audit objectives with balance-related and presentation and disclosure-related audit objectives.

We discussed earlier that tests of details of balances must be designed to satisfy balance-related audit objectives for each account and the extent of these tests can be reduced when transaction-related audit objectives have been satisfied by tests of controls or substantive tests of transactions. You also need to understand how each transaction-related audit objective relates to each balance-related audit objective. Table 13-5 gives a general presentation of these relationships and illustrates that, even when all transaction-related audit objectives are met, the auditor will still rely primarily on substantive tests of balances to meet the following balance-related audit objectives:

- Realizable value
- Rights and obligations

Additional substantive tests of balances are also likely for the other balance-related audit objectives, depending on the results of the tests of controls and substantive tests of transactions.

This chapter emphasizes the relationship between audit procedures performed to satisfy transaction-related audit objectives and balance-related audit objectives. The auditor also performs audit procedures to obtain assurance about the four presentation and disclosure-related audit objectives described in Chapter 6. The auditor's approach

TABLE 13-5 Relationship of Transaction-Related Audit Objectives to Balance-Related Audit Objectives

Transaction-Related Audit Objective	Balance-Related Audit Objective	Nature of Relationship	Explanation
Occurrence	Existence or completeness	Direct	There is a direct relationship of the occurrence transaction-related audit objective to the existence balance-related audit objective if a class of transactions increases the related account balance (e.g., sales transactions increase accounts receivable). There is a direct relationship of the occurrence transaction-related audit objective to the completeness balance-related audit objective if a class of transactions decreases the related account balance (e.g., cash receipts transactions decrease accounts receivable).
Completeness	Completeness or existence	Direct	See comments above for existence objective.
Accuracy	Accuracy	Direct	–
Posting and summarization	Detail tie-in	Direct	–
Classification	Classification	Direct	–
Timing	Cutoff	Direct	–
	Realizable value	None	Few internal controls over realizable value are related to classes of transactions, but the credit approval process affects the extent of tests.
	Rights and obligations	None	Few internal controls over rights and obligations are related to classes of transactions.

to obtaining evidence related to presentation and disclosure-related audit objectives is consistent with the approach described in this chapter. The auditor performs tests of controls and substantive procedures to obtain assurance that all audit objectives are achieved for information and amounts included in those disclosures.

SUMMARY OF KEY EVIDENCE-RELATED TERMS

Several evidence-related terms have been used in the past several chapters. To help you distinguish and understand each of these terms, we summarize them in Table 13-6, and comment briefly on each key evidence-related term.

Phases of the Audit Process The four **phases of the audit process** in the first column are the primary way that audits are organized, as described in Chapter 6. Figure 13-9 (p. 443) shows the key components of these four phases of the audit process.

Audit Objectives These are the objectives on an audit that must be met before the auditor can conclude that any given class of transactions or account balance is fairly stated. There are six transaction-related, eight balance-related, and four presentation

TABLE 13-6 Relationship Among Five Key Evidence-Related Terms

Phases of the Audit Process	Audit Objectives	Types of Tests	Evidence Decisions	Types of Evidence
Plan and Design an Audit Approach (Phase I)		Risk assessment procedures • Procedures to understand client's business and industry • Procedures to understand internal control • Planning analytical procedures	• Audit procedures • Timing	Inspection Inquiries of client Analytical procedures
Perform Tests of Controls and Substantive Tests of Transactions (Phase II)	Transaction-related audit objectives • Occurrence • Completeness • Accuracy • Posting and summarization • Classification • Timing	Procedures to obtain an understanding and tests of controls Substantive tests of transactions	• Audit procedures • Sample size • Items to select • Timing • Audit procedures • Sample size • Items to select • Timing	Inspection Observation Inquiries of client Reperformance Recalculation
Perform Analytical Procedures and Tests of Details of Balances (Phase III)	Balance-related audit objectives • Existence • Completeness • Accuracy • Classification • Cutoff • Detail tie-in • Realizable value • Rights and obligations	Analytical procedures Tests of details of balances	• Audit procedures • Timing • Audit procedures • Sample size • Items to select • Timing	Physical examination Confirmation Inspection Inquiries of client Reperformance Analytical procedures Recalculation
Complete the Audit and Issue an Audit Report (Phase IV)	Presentation and disclosure-related audit objectives • Occurrence and rights and obligations • Completeness • Accuracy and valuation • Classification and understandability	Analytical procedures Tests of details of balances	• Audit procedures • Timing • Audit procedures • Sample size • Items to select • Timing	Analytical procedures Inspection Inquiries of client

and disclosure-related audit objectives, all of which are listed in Table 13-6. Observe that all transaction-related audit objectives are primarily addressed in phase II, balance-related audit objectives in phase III, and presentation and disclosure-related audit objectives in phase IV.

Types of Tests The five types of audit tests discussed earlier in the chapter that auditors use to determine whether financial statements are fairly stated are included in the third column in Table 13-6. Observe that analytical procedures are used in Phase III and Phase IV. Keep in mind that analytical procedures are required as part of the planning risk assessment procedures in Phase I. Recall that analytical procedures are also required at the completion of the audit, which is why they are included in Phase IV. It may appear unusual to have tests of details of balances included in Phase IV. We will explain the nature of the procedures auditors use during completing the audit, including meeting the presentation and disclosure-related objectives, in Chapter 24.

Evidence Decisions The four subcategories of decisions the auditor makes in accumulating audit evidence are included in the fourth column in Table 13-6. Except for analytical procedures, all four evidence decisions apply to each type of test.

Types of Evidence The eight broad categories of evidence auditors accumulate are included in the last column of Table 13-6. The relationship of types of evidence to types of tests was summarized in Table 13-2 on page 426.

SUMMARY OF THE AUDIT PROCESS

OBJECTIVE 13-7

Integrate the four phases of the audit process.

Figure 13-9 shows the four phases for the entire audit process, and Table 13-7 (p. 444) shows the timing of the tests in each phase for an audit with a December 31 balance sheet date.

Phase I: Plan and Design an Audit Approach

Auditors use information obtained from risk assessment procedures related to client acceptance and initial planning, understanding the client's business and industry, assessing the client's business risks, and performing preliminary analytical procedures (first four boxes in Figure 13-9) primarily to assess inherent risk and acceptable audit risk. Auditors use assessments of materiality, acceptable audit risk, inherent risk, control risk, and any identified fraud risks to develop an overall audit strategy and audit program.

At the end of phase I, the auditor should have a well-defined audit strategy and plan and a specific audit program for the entire audit.

Phase II: Perform Tests of Controls and Substantive Tests of Transactions

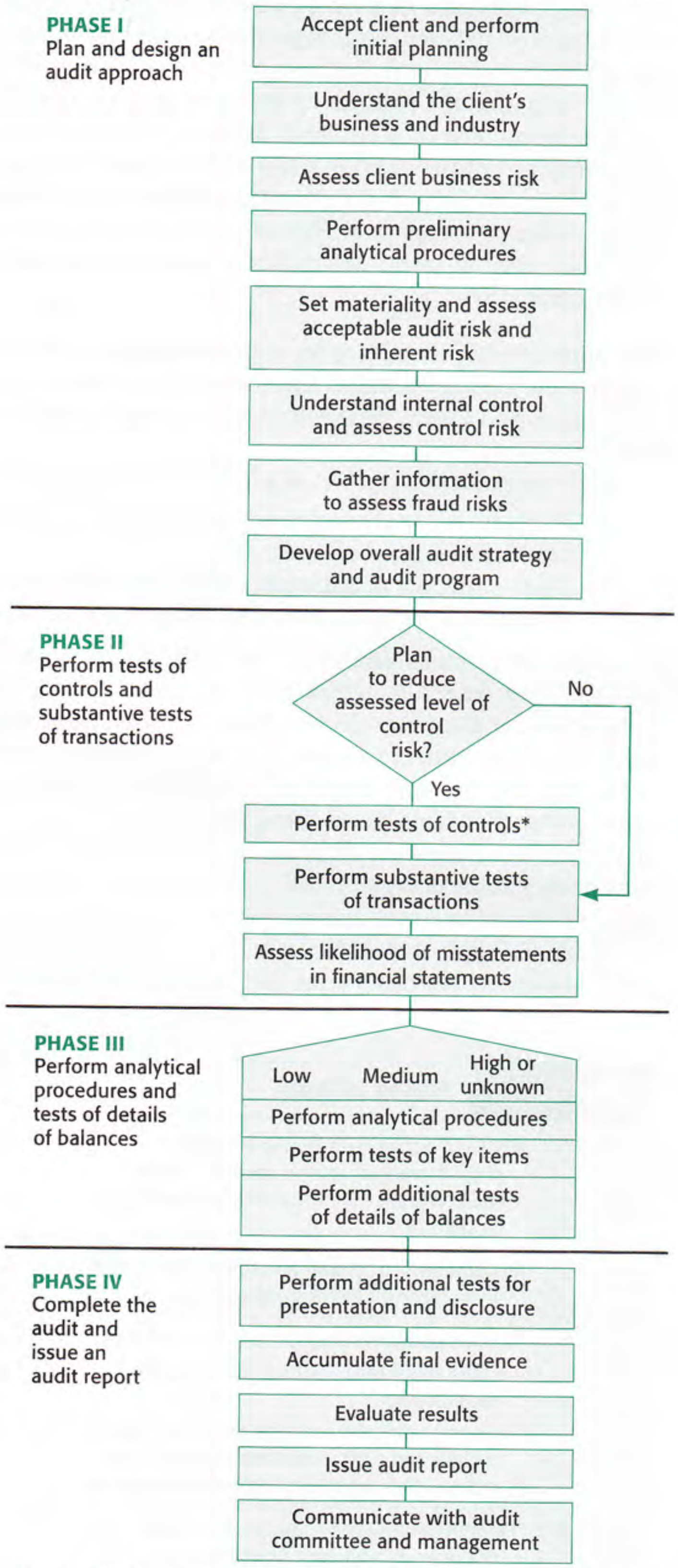
Auditors perform tests of controls and substantive tests of transactions during this phase. The objectives of phase II are to:

1. Obtain evidence in support of the specific controls that contribute to the auditor's assessed control risk (that is, where it is reduced below the maximum), including integrated audits of internal control over financial reporting.
2. Obtain evidence in support of the monetary correctness of transactions.

The first objective is met by performing tests of controls, and the second by performing substantive tests of transactions. Frequently both types of tests are done simultaneously on the same transactions. When controls are not considered effective or when the auditor finds deviations, substantive tests can be expanded in this phase or in phase III, along with considering the implications for the auditor's report on internal control over financial reporting in an integrated audit.

Because the results of tests of controls and substantive tests of transactions are a major determinant of the extent of tests of details of balances, they are often done two or three months before the balance sheet date. This helps the auditor revise

FIGURE 13-9 **Summary of the Audit Process**



*The extent of testing of controls is determined by planned reliance on controls. For public companies required to have an audit of internal control, testing must be sufficient to issue an opinion on internal control over financial reporting.

the tests of details of balance audit program for unexpected results in the earlier tests and to complete the audit as soon as possible after the balance sheet date. This approach is also used in an integrated audit to allow management an opportunity to correct control deficiencies in time to allow auditor testing of the newly implemented controls before year-end. Auditors update their testing of internal controls near year-end to verify that the controls continue to operate effectively.

For computerized accounting systems, auditors often perform tests of controls and substantive tests of transactions throughout the year to identify significant or unusual transactions and determine whether any changes have been made to the client's computer programs. This approach is often called continuous auditing and is frequently used in integrated audits of financial statements and internal control for public companies.

Phase III: Perform Analytical Procedures and Tests of Details of Balances

The objective of phase III is to obtain sufficient additional evidence to determine whether the ending balances and footnotes in financial statements are fairly stated. The nature and extent of the work will depend heavily on the findings of the two previous phases.

The two general categories of phase III procedures are:

1. Substantive analytical procedures that assess the overall reasonableness of transactions and balances.
2. Tests of details of balances, which are audit procedures to test for monetary misstatements in the balances in the financial statements.

Table 13-7 shows analytical procedures are performed before and after the balance sheet date. Because of their low cost, analytical procedures are commonly used whenever they are relevant. They are often performed early, using preliminary data before year-end, as a means of planning and directing other audit tests to specific areas. But the greatest benefit from calculating ratios and making comparisons occurs after the client has finished preparing its financial statements. Ideally, these analytical procedures are done before tests of details of balances so they can then be used to determine how extensively to test balances. They are also used as a part of performing tests of balances and during the completion phase of the audit.

Table 13-7 also shows that tests of details of balances are normally done last. On some audits, all are done after the balance sheet date. When clients want to issue

TABLE 13-7 Timing of Tests

Phase I	Plan and design audit approach. Update understanding of internal control. Update audit program. Perform preliminary analytical procedures.	8-31-13	
Phase II	Perform tests of controls and substantive tests of transactions for first 9 months of the year.	9-30-13	
Phase III	Confirm accounts receivable. Observe inventory.	10-31-13	
	Perform cutoff tests. Request various other confirmations.	12-31-13	Balance sheet date
	Perform analytical procedures, complete tests of controls and substantive tests of transactions, and complete most tests of details of balances.	1-7-14	Books closed
Phase IV	Perform procedures to support presentation and disclosure-related audit objectives, summarize results, accumulate final evidence (including analytical procedures), and finalize audit.	2-15-14	Last date of field work
	Issue audit report.	2-25-14	

statements soon after the balance sheet date, the more time-consuming tests of details of balances are done at interim dates before year-end with additional work being done to roll-forward the audited interim-date balances to year-end. Substantive tests of balances performed before year-end provide less assurance and are normally only done when internal controls are effective.

Phase IV: Complete the Audit and Issue an Audit Report

After the first three phases are completed, auditors must accumulate additional evidence related to presentation and disclosure-related objectives, summarize the results, issue the audit report, and perform other forms of communication. As shown in Figure 13-9 (p. 443), this phase has several parts.

Perform Additional Tests for Presentation and Disclosure Recall from Chapter 6 that auditors accumulate evidence related to presentation and disclosure-related audit objectives. The procedures auditors perform to support the four presentation and disclosure-related objectives are similar to audit procedures performed to support both transaction- and balance-related audit objectives. For example, management implements internal controls to ensure that all required footnote disclosures are included and that amounts and other information disclosed are accurate. Auditor tests of those controls provide evidence supporting the *completeness* and *accuracy* presentation and disclosure-related audit objectives. Auditors also perform substantive tests to obtain sufficient appropriate evidence that information disclosed in the footnotes reflects actual transactions and balances that have occurred and that represent obligations of the client to support the *occurrence and rights and obligation* objectives. A considerable portion of the auditor's testing related to presentation and disclosure-related objectives is done during the first three phases, but additional testing is done in phase IV.

During this last phase of the audit, auditors perform audit procedures related to contingent liabilities and subsequent events. Contingent liabilities are potential liabilities that must be disclosed in the client's footnotes. Auditors must make sure that the disclosure is complete and accurate. Subsequent events represent events that occasionally occur after the balance sheet date, but before the issuance of the financial statements and auditor's report, that have an effect on the financial statements. Specific review procedures are designed to bring to the auditor's attention any subsequent events that affect the financial statements. Both contingent liabilities and subsequent events are studied in Chapter 24.

Accumulate Final Evidence In addition to the evidence obtained for each cycle during phases I and II, and for each account during phase III, auditors must gather the following evidence for the financial statements as a whole during the completion phase:

- Perform final analytical procedures
- Evaluate the going-concern assumption
- Obtain a client representation letter
- Read information in the annual report to make sure that it is consistent with the financial statements

Issue Audit Report The type of audit report issued depends on the evidence accumulated and the audit findings. The appropriate reports for differing circumstances were studied in Chapter 3.

Communicate with Audit Committee and Management The auditor is required to communicate significant deficiencies in internal control to the audit committee or senior management. Auditing standards also require the auditor to communicate certain other matters to those charged with governance, such as the audit committee or a similarly designated body, upon completion of the audit, if not sooner. Although not required, auditors often also make suggestions to management to improve business performance.

ESSENTIAL TERMS

Analytical procedures—evaluations of financial information through analysis of plausible relationships among financial and nonfinancial data

Evidence mix—the combination of the types of tests to obtain sufficient appropriate evidence for a cycle; there are likely to be variations in the mix from cycle to cycle depending on the circumstances of the audit

Further audit procedures—combination of tests of controls, substantive tests of transactions, analytical procedures, and tests of details of balances performed in response to risks of material misstatement identified by the auditor's risk assessment procedures

Phases of the audit process—the four aspects of a complete audit: (1) plan and design an audit approach, (2) perform tests of controls and substantive tests of transactions, (3) perform analytical procedures and tests of details of balances, and (4) complete the audit and issue an audit report

Procedures to obtain an understanding of internal control—procedures used by the auditor to gather evidence about the design and implementation of specific controls

Substantive tests—audit procedures designed to test for dollar (monetary) misstatements of financial statement balances

Substantive tests of transactions—audit procedures testing for monetary misstatements to determine whether the six transaction-related audit objectives have been satisfied for each class of transactions

Tests of controls—audit procedures to test the effectiveness of controls in support of a reduced assessed control risk

Tests of details of balances—audit procedures testing for monetary misstatements to determine whether the eight balance-related audit objectives have been satisfied for each significant account balance

Types of tests—the five categories of audit tests auditors use to determine whether financial statements are fairly stated: risk assessment procedures, tests of controls, substantive tests of transactions, analytical procedures, and tests of details of balances

REVIEW QUESTIONS

13-1 (Objective 13-1) What are the five types of tests auditors use to determine whether financial statements are fairly stated? Identify which tests are performed to reduce control risk and which tests are performed to reduce planned detection risk. Also, identify which tests will be used when auditing internal control over financial reporting.

13-2 (Objective 13-1) What is the purpose of risk assessment procedures and how do they differ from the four other types of audit tests?

13-3 (Objective 13-1) What is the purpose of tests of controls? Identify specific accounts on the financial statements that are affected by performing tests of controls for the acquisition and payment cycle.

13-4 (Objective 13-1) Distinguish between a test of control and a substantive test of transactions. Give two examples of each.

13-5 (Objectives 13-1, 13-4) State a test of control audit procedure to test the effectiveness of the following control: Approved wage rates are used in calculating employees' earnings. State a substantive test of transactions audit procedure to determine whether approved wage rates are actually used in calculating employees' earnings.

13-6 (Objective 13-1) A considerable portion of the tests of controls and substantive tests of transactions are performed simultaneously as a matter of audit convenience. But the substantive tests of transactions procedures and sample size, in part, depend on the results of the tests of controls. How can the auditor resolve this apparent inconsistency?

13-7 (Objectives 13-2, 13-4) Evaluate the following statement: "Tests of sales and cash receipts transactions are such an essential part of every audit that I like to perform them as near the end of the audit as possible. By that time I have a fairly good understanding of the client's business and its internal controls because confirmations, cutoff tests, and other procedures have already been completed."

13-8 (Objectives 13-1, 13-2) Explain how the calculation and comparison to previous years of the gross margin percentage and the ratio of accounts receivable to sales are related to the confirmation of accounts receivable and other tests of the accuracy of accounts receivable.

13-9 (Objective 13-1) Distinguish between substantive tests of transactions and tests of details of balances. Give one example of each for the acquisition and payment cycle.

13-10 (Objective 13-3) The auditor of Ferguson's, Inc., identified two internal controls in the sales and collection cycle for testing. In the first control, the computer verifies that a planned sale on account will not exceed the customer's credit limit entered in the accounts receivable master file. In the second control, the accounts receivable clerk matches bills of lading, sales invoices, and customer orders before recording in the sales journal. Describe how the presence of general controls over software programs and master file changes affects the extent of audit testing of each of these two internal controls.

13-11 (Objective 13-4) Assume that the client's internal controls over the recording and classifying of fixed asset additions are considered deficient because the individual responsible for recording new acquisitions has inadequate technical training and limited experience in accounting. How will this situation affect the evidence you should accumulate in auditing fixed assets as compared with another audit in which the controls are excellent? Be as specific as possible.

13-12 (Objective 13-2) For each of the eight types of evidence discussed in Chapter 7, identify whether it is applicable for risk assessment procedures, tests of controls, substantive tests of transactions, analytical procedures, and tests of details of balances.

13-13 (Objective 13-2) Rank the following types of tests from most costly to least costly: analytical procedures, tests of details of balances, risk assessment procedures, tests of controls, and substantive tests of transactions.

13-14 (Objective 13-2) In Figure 13-3 (p. 429), explain the difference among C_3, C_2, and C_1. Explain the circumstances under which it will be a good decision to obtain audit assurance from substantive tests at point C_1. Do the same for points C_2 and C_3.

13-15 (Objective 13-4) Table 13-3 (p. 431) illustrates variations in the emphasis on different types of audit tests. What are the benefits to the auditor of identifying the best mix of tests?

13-16 (Objective 13-5) State the four-step approach to designing tests of controls and substantive tests of transactions.

13-17 (Objective 13-5) Explain the relationship between the methodology for designing tests of controls and substantive tests of transactions in Figure 13-4 (p. 433) and the methodology for designing tests of details of balances in Figure 13-6 (p. 435).

13-18 (Objective 13-5) Why is it desirable to design tests of details of balances before performing tests of controls and substantive tests of transactions? State the assumptions that the auditor must make in doing so. What does the auditor do if the assumptions are wrong?

13-19 (Objective 13-5) Explain the relationship of performance materiality, inherent risk, and control risk to planned tests of details of balances.

13-20 (Objective 13-5) List the eight balance-related audit objectives in the verification of the ending balance in inventory and provide one useful audit procedure for each of the objectives.

13-21 (Objective 13-7) Why do auditors often consider it desirable to perform audit tests throughout the year rather than wait until year-end? List several examples of evidence that can be accumulated before year-end.

MULTIPLE CHOICE QUESTIONS FROM CPA EXAMINATIONS

13-22 (Objective 13-1) The following questions deal with tests of controls. Choose the best response.

a. To support the auditor's initial assessment of control risk below maximum, the auditor performs procedures to determine that internal controls are operating effectively. Which of the following audit procedures is the auditor performing?
   (1) Tests of details of balances
   (2) Substantive tests of transactions
   (3) Tests of controls
   (4) Tests of trends and ratios

b. The primary objective of performing tests of controls is to obtain
   (1) a reasonable degree of assurance that the client's internal controls are operating effectively on a consistent basis throughout the year.
   (2) sufficient, appropriate audit evidence to afford a reasonable basis for the auditor's opinion, without the need for additional evidence.
   (3) assurances that informative disclosures in the financial statements are reasonably adequate.
   (4) knowledge and understanding of the client's prescribed procedures and methods.

c. To test the effectiveness of controls, an auditor ordinarily selects from a variety of techniques, including
   (1) analysis.
   (2) confirmation.
   (3) reperformance.
   (4) comparison.

d. Tests of controls are most likely to be omitted when
   (1) an account balance reflects many transactions.
   (2) control risk is assessed at less than the maximum.
   (3) the understanding of the control structure indicates that evaluating the effectiveness of control policies and procedures is likely to be inefficient.
   (4) the auditor wishes to increase the acceptable level of detection risk.

13-23 (Objectives 13-1, 13-5, 13-7) The following questions concern types of audit tests. Choose the best response.

a. The auditor looks for an indication on duplicate sales invoices to see whether the accuracy of invoices has been verified. This is an example of
   (1) a test of details of balances.
   (2) a test of control.
   (3) a substantive test of transactions.
   (4) both a test of control and a substantive test of transactions.

b. An auditor's decision either to apply analytical procedures as substantive tests or to perform substantive tests of transactions and account balances usually is determined by the
   (1) availability of data aggregated at a high level.
   (2) relative effectiveness and efficiency of the tests.
   (3) timing of tests performed after the balance sheet date.
   (4) auditor's familiarity with industry trends.

c. The auditor faces a risk that the audit will not detect material misstatements that occur in the accounting process. To minimize this risk, the auditor relies primarily on
   (1) substantive tests.
   (2) tests of controls.
   (3) internal control.
   (4) statistical analysis.

d. A conceptually logical approach to the auditor's evaluation of internal control consists of the following four steps:
   I. Determining the internal controls that should prevent or detect errors and fraud.
   II. Identifying control deficiencies to determine their effect on the nature, timing, or extent of auditing procedures to be applied and suggestions to be made to the client.
   III. Determining whether the necessary internal control procedures are prescribed and are being followed satisfactorily.
   IV. Considering the types of errors and fraud that can occur.

   What should be the order in which these four steps are performed?
   (1) I, II, III, and IV
   (2) I, III, IV, and II
   (3) III, IV, I, and II
   (4) IV, I, III, and II

DISCUSSION QUESTIONS AND PROBLEMS

13-24 (Objectives 13-1, 13-2) The following are 11 audit procedures taken from an audit program:

1. Foot the accounts payable trial balance and compare the total with the general ledger.
2. Confirm accounts payable balances directly with vendors.
3. Account for a sequence of checks in the cash disbursements journal to determine whether any have been omitted.
4. Examine vendors' invoices to verify the ending balance in accounts payable.
5. Compare the balance in payroll tax expense with previous years. The comparison takes the increase in payroll tax rates into account.
6. Examine the internal auditor's initials on monthly bank reconciliations as an indication of whether they have been reviewed.
7. Examine vendors' invoices and other documentation in support of recorded transactions in the acquisitions journal.
8. Multiply the commission rate by total sales and compare the result with commission expense.
9. Examine vendors' invoices and other supporting documents to determine whether large amounts in the repair and maintenance account should be capitalized.
10. Discuss the duties of the cash disbursements clerk with him and observe whether he has responsibility for handling cash or preparing the bank reconciliation.
11. Inquire about the accounts payable supervisor's monthly review of a computer-generated exception report of receiving reports and purchase orders that have not been matched with a vendor invoice.

Required

a. Indicate whether each procedure is a test of control, substantive test of transactions, analytical procedure, or a test of details of balances.

b. Identify the type of evidence for each procedure.

13-25 (Objective 13-3) Beds and Spreads, Inc., specializes in bed and bath furnishings. Its inventory system is linked through the Internet to key suppliers. The auditor identified the following internal controls in the inventory cycle:

1. The computer initiates an order only when perpetual inventory levels fall below prespecified inventory levels in the inventory master file.
2. The sales and purchasing department managers review inventory reorder points on a monthly basis for reasonableness. Approved changes to reorder points are entered into the master file by the purchasing department manager and an updated printout is generated for final review. Both managers verify that all changes were entered correctly and initial the final printout indicating final approval. These printouts are maintained in the purchasing department.
3. The computer will initiate a purchase order only for inventory product numbers maintained in the inventory master file.
4. The purchasing department manager reviews a computer-generated exception report that highlights weekly purchases that exceed $10,000 per vendor.
5. Sales clerks send damaged merchandise on the store shelves to the back storage room. The sales department manager examines the damaged merchandise each month and prepares a listing showing the estimated salvage value by product number. The accounting department uses the listing to prepare a monthly adjustment to recorded inventory values.

Required

a. Consider each of the preceding controls separately. Identify whether the control is a(n)
   (1) automated control embedded in computer software.
   (2) manual control with effectiveness based significantly on IT-generated information.
   (3) manual control with effectiveness not significantly reliant on IT-generated information.

b. Describe how the extent of testing of each control will be affected in subsequent years if general controls are effective, particularly controls over program and master file changes.

13-26 (Objectives 13-1, 13-2, 13-3, 13-6) The following are audit procedures from different transaction cycles:

1. Examine sales invoices for evidence of internal verification of prices, quantities, and extensions.
2. Select items from the client's perpetual inventory records and examine the items in the company's warehouse.
3. Use audit software to foot and cross-foot the cash disbursements journal and trace the balance to the general ledger.
4. Select a sample of entries in the acquisitions journal and trace each one to a related vendor's invoice to determine whether one exists.
5. Examine documentation for acquisition transactions before and after the balance sheet date to determine whether they are recorded in the proper period.
6. Inquire of the credit manager whether each account receivable on the aged trial balance is collectible.
7. Compute inventory turnover for each major product and compare with previous years.
8. Confirm a sample of notes payable balances, interest rates, and collateral with lenders.
9. Use audit software to foot the accounts receivable trial balance and compare the balance with the general ledger.

Required

a. For each audit procedure, identify the transaction cycle being audited.
b. For each audit procedure, identify the type of evidence.
c. For each audit procedure, identify whether it is a test of control or a substantive test.
d. For each substantive audit procedure, identify whether it is a substantive test of transactions, a test of details of balances, or an analytical procedure.
e. For each test of control or substantive test of transactions procedure, identify the transaction-related audit objective or objectives being satisfied.
f. For each analytical procedure or test of details of balances procedure, identify the balance-related audit objective or objectives being satisfied.

13-27 (Objective 13-4) The following are three situations, all involving nonpublic companies, in which the auditor is required to develop an audit strategy:

1. The client has inventory at approximately 50 locations in a three-state region. The inventory is difficult to count and can be observed only by traveling by automobile. The internal controls over acquisitions, cash disbursements, and perpetual records are considered effective. This is the fifth year that you have done the audit, and audit results in past years have always been excellent. The client is in excellent financial condition.
2. This is the first year of an audit of a medium-sized company that is considering selling its business because of severe underfinancing. A review of the acquisition and payment cycle indicates that controls over cash disbursements are excellent but controls over acquisitions cannot be considered effective. The client lacks receiving reports and a policy as to the proper timing to record acquisitions. When you review the general ledger, you observe that there are many large adjusting entries to correct accounts payable.
3. You are doing the audit of a small loan company with extensive receivables from customers. Controls over granting loans, collections, and loans outstanding are considered effective, and there is extensive follow-up of all outstanding loans weekly. You have recommended a new computer system for the past 2 years, but management believes the cost is too great, given their low profitability. Collections are an ongoing problem because many of the customers have severe financial problems. Because of adverse economic conditions, loans receivable have significantly increased and collections are less than normal. In previous years, you have had relatively few adjusting entries.

Required

a. For audit 1, recommend an evidence mix for the five types of tests for the audit of inventory and cost of goods sold. Justify your answer. Include in your recommendations both tests of controls and substantive tests.

b. For audit 2, recommend an evidence mix for the audit of the acquisition and payment cycle, including accounts payable. Justify your answer.

c. For audit 3, recommend an evidence mix for the audit of outstanding loans. Justify your answer.

13-28 (Objectives 13-1, 13-5, 13-6) The following internal controls for the acquisition and payment cycle were selected from a standard internal control questionnaire.

1. Checks are mailed by the owner or manager or a person under her supervision after signing.
2. All supporting documents are cancelled after checks are signed or electronic funds transfers are approved.
3. The authorized signer compares data on supporting documents with checks and electronic funds transfer authorizations.
4. Vendors' invoices are recalculated before payment.
5. Approved purchase orders are required for all acquisitions of goods.
6. Prenumbered receiving reports are prepared as support for acquisitions and numerically accounted for.
7. Dates on receiving reports are compared with vendors' invoices before entry into the acquisitions journal.
8. The accounts payable master file is updated, balanced, and reconciled to the general ledger monthly.
9. Account classifications are reviewed by someone other than the preparer.
10. All checks are signed by the owner or manager.

Required

a. For each control, identify which element of the five categories of control activities is applicable (separation of duties, proper authorization, adequate documents or records, physical control over assets and records, or independent checks on performance).

b. For each control, state which transaction-related audit objective(s) is (are) applicable.

c. For each control, write an audit procedure that could be used to test the control for effectiveness.

d. For each control, identify a likely misstatement, assuming that the control does not exist or is not functioning.

e. For each likely misstatement, identify a substantive audit procedure to determine whether the misstatement exists.

13-29 (Objectives 13-5, 13-7) Following are evidence decisions for the three audits described in Figure 13-3 on page 429:

Audit A	Ineffective client internal controls
Audit B	Very effective client internal controls
Audit C	Somewhat effective client internal controls

Evidence Decisions

1. The auditor performed extensive positive confirmations at the balance sheet date.
2. The auditor performed extensive tests of controls and minimal substantive tests.
3. The auditor decided it was possible to assess control risk below the maximum.
4. The auditor performed substantive tests.
5. This audit was likely the least expensive to conduct.
6. The auditor confirmed receivables at an interim date.
7. The auditor identified effective controls and also identified some deficiencies in controls.
8. The auditor performed tests of controls.

Required

a. Explain why Audit B represents the maximum amount of reliance that can be placed on internal control. Why can't all the audit assurance be obtained by tests of controls?

b. Explain why the auditor may not place the maximum extent of reliance on controls in Audit B and Audit C.

c. For each of the eight evidence decisions, indicate whether the evidence decision relates to each of the audits described above. Every evidence decision relates to at least one of the audits, and some may relate to two or all three audits.

13-30 (Objectives 13-5, 13-7) The following are parts of a typical audit for a company with a fiscal year-end of July 31.

1. Understand internal control and assess control risk.
2. Perform analytical procedures for accounts payable.
3. Confirm accounts payable.
4. Perform tests of controls and substantive tests of transactions for the acquisition and payment and payroll and personnel cycles.
5. Perform other tests of details of balances for accounts payable.
6. Perform tests for review of subsequent events.
7. Accept the client.
8. Issue the audit report.
9. Set acceptable audit risk and decide preliminary judgment about materiality and performance materiality.

Required

a. Identify the phase of the audit in which each activity occurs.

b. Put parts 1 through 9 of the audit in the sequential order in which you will expect them to be performed in a typical audit.

c. Identify those parts that will frequently be done before July 31.

13-31 (Objectives 13-4, 13-5) Following are several decisions that the auditor must make in an audit of a nonpublic company. Letters indicate alternative conclusions that could be made.

Decisions	Alternative Conclusions
1. Determine whether it is cost effective to perform tests of controls.	A. It is cost effective B. It is not cost effective
2. Perform substantive tests of details of balances.	C. Perform reduced tests D. Perform expanded tests
3. Complete initial assessment of control risk.	E. Controls are effective F. Controls are ineffective
4. Perform tests of controls.	G. Controls are effective H. Controls are ineffective

Required

a. Identify the sequence in which the auditor should make decisions 1 to 4.

b. For the audit of the sales and collection cycle and accounts receivable, an auditor reached the following conclusions: A, D, E, H. Put the letters in the appropriate sequence and evaluate whether the auditor's logic was reasonable. Explain your answer.

c. For the audit of inventory and related inventory cost records, an auditor reached the following conclusions: B, C, E, G. Put the letters in the appropriate sequence and evaluate whether the auditor used good professional judgment. Explain your answer.

d. For the audit of property, plant, and equipment and related acquisition records, an auditor reached the following conclusions: A, C, F, G. Put the letters in the appropriate sequence and evaluate whether the auditor used good professional judgment. Explain your answer.

e. For the audit of payroll expenses and related liabilities, an auditor recorded the following conclusions: D, F. Put the letters in the appropriate sequence and evaluate whether the auditor used good professional judgment. Explain your answer.

13-32 (Objectives 13-1, 13-2) The following are audit procedures from different transaction cycles:

1. Examine duplicate copy of shipping documents for evidence that quantities were verified before shipment.
2. Select a sample of payroll checks and agree hours to employee time records.
3. Use audit software to foot and cross-foot the sales journal and trace the balance to the general ledger.
4. Examine voucher packages and related vendor invoices for evidence of approval of account classification.
5. Trace a sample of shipping documents to entry in the sales journal.
6. Examine a sample of warehouse removal slips for signature of authorized official.
7. Select a sample of entries in the cash receipts journal and trace to posting in individual customer accounts receivable records.
8. Select a sample of sales invoices and agree prices to the approved price list.

Required

a. For each audit procedure, identify whether it is a test of control or a substantive test of transactions.

b. For each audit procedure, identify the transaction-related audit objective or objectives being satisfied.

13-33 (Objective 13-4) Angela Walsh is a new staff auditor. On her first three engagements, she was assigned to perform tests of controls for acquisitions and payments and test of details of balances for accounts payable. The approach taken in each audit is briefly described below:

Audit 1 – The client is a medium-sized company. Extensive tests of controls were performed for acquisitions and payments. Fairly extensive analytical procedures were also performed. The test of details of balances of the year-end accounts payable balance were minimal, and no confirmations are sent (confirmations are not required for testing accounts payable).

Audit 2 – This company is also medium-sized. Extensive test of controls were also performed, but after these tests were completed, additional substantive tests of transactions were performed. Extensive tests of the year-end accounts payable balance were performed, although no confirmations were sent.

Audit 3 – Although the auditors gained an understanding of internal control, no tests of controls were performed over acquisitions and payments. However, extensive substantive tests of transactions were performed, and confirmations were sent as part of the extensive testing of year-end accounts payable. Although this company was smaller than the first two companies, the total audit time spent testing accounts payable was greater than for the first two audits.

Angela is confused by the apparent inconsistency in the audit approach on the three audits, and concludes that the audit approach and amount of audit evidence to collect depends on the audit partner in charge of the engagement.

Required

a. Match each engagement with one of the following descriptions:
   1. Extensive reliance on controls was planned for this audit engagement, but control risk was increased after tests of controls.
   2. This audit is likely for a public company, and is also the most efficient audit.
   3. This company has ineffective controls, and may also have fraud risks present.

b. What other factors likely explain the different approaches to the audit of acquisitions and payments and accounts payable for these three engagements?

c. What could Angela's supervisors have done to improve her understanding of the audit strategy for each engagement?

13-34 (Objectives 13-1, 13-5, 13-6) The following are independent internal controls commonly found in the acquisition and payment cycle. Each control is to be considered independently.

1. Before a check is prepared to pay for acquisitions by the accounts payable department, the related purchase order and receiving report are attached to the vendor's invoice being paid. A clerk compares the quantity on the invoice with the receiving report and purchase order, compares the price with the purchase order, recomputes the extensions, re-adds the total, and examines the account number indicated on the invoice to determine whether it is correctly classified. He indicates his performance of these procedures by initialing the invoice.
2. At the end of each month, an accounting clerk accounts for all prenumbered receiving reports (documents evidencing the receipt of goods) issued during the month and traces each one to the related vendor's invoice and acquisitions journal entry. The clerk's tests do not include testing the quantity or description of the merchandise received.
3. The cash disbursements clerk is prohibited from handling cash. The bank account is reconciled by another person even though the clerk has sufficient expertise and time to do it.
4. Before a check is signed by the controller, she examines the supporting documentation accompanying the check. At that time, she initials each vendor's invoice to indicate her approval.
5. After the controller signs the checks, her secretary writes the check number and the date the check was issued on each of the supporting documents to prevent their reuse.

Required

a. For each of the internal controls, state the transaction-related audit objective(s) the control is meant to fulfill.

b. For each control, list one test of control the auditor could perform to test the effectiveness of the control.

c. For each control, list one substantive test the auditor could perform to determine whether financial misstatements are actually taking place.

CASES

13-35 (Objectives 13-4, 13-5) McClain Plastics has been an audit client of Belcor, Rich, Smith & Barnes, CPAs (BRS&B), for several years. McClain Plastics was started by Evers McClain, who owns 51% of the company's stock. The balance is owned by about 20 stockholders who are investors with no operational responsibilities. McClain Plastics makes products that have plastic as their primary material. Some are made to order, but most products are made for inventory. An example of a McClain-manufactured product is a plastic chair pad that is used in a carpeted office. Another is a plastic bushing that is used with certain fastener systems.

McClain has grown from a small, two-product company, when they first engaged BRS&B, to a successful diverse company. At the time Randall Sessions of BRS&B became manager of the audit, annual sales had grown to $200 million and profits to $10.9 million. Historically, the company presented no unusual audit problems, and BRS&B had issued an unqualified opinion every year.

The audit approach BRS&B always used on the audit of McClain Plastics was a "substantive" audit approach. Under this approach, the in-charge auditor obtained an understanding of internal control as part of the risk assessment procedures, but control risk was assessed at the maximum (100%). Extensive analytical procedures were done on the income statement, and unusual fluctuations were investigated. Detailed audit procedures emphasized balance sheet accounts. The theory was that if the balance sheet accounts were correct at year-end and had been audited as of the beginning of the year, then retained earnings and the income statement must be correct.

Part I

In evaluating the audit approach for McClain for the current year's audit, Sessions believed that a substantive approach was really only appropriate for the audits of small nonpublic companies. In his judgment, McClain Plastics, with sales of $200 million and 146 employees, had reached the size where it was not economical, and probably not wise, to concentrate all the tests on the balance sheet. Furthermore, although McClain is not a public company, Sessions recognized that similar public companies are required by Section 404 of the Sarbanes–Oxley Act and related PCAOB standards to have an integrated audit of the financial statements and internal control over financial reporting. Therefore, he designed an audit program that emphasized identifying internal controls in all major transaction cycles and included tests of controls. The intended economic benefit of this "reducing control risk" approach was that the time spent testing controls will be more than offset by reduced tests of details of the balance sheet accounts.

In planning tests of inventories, Sessions used the audit risk model included in auditing standards to determine the number of inventory items BRS&B will test at year-end. Because of the number of different products, features, sizes, and colors, McClain's inventory consisted of 2,450 different items. These were maintained on a perpetual inventory management system that used a relational database.

In using the audit risk model for inventories, Sessions believed that an audit risk of 5% was acceptable. He assessed inherent risk as high (100%) because inventory, by its nature, is subject to many types of misstatements. Based on his understanding of the relevant transaction cycles, Sessions believed that internal controls were effective. He therefore assessed control risk as low (50%) before performing tests of controls. Sessions also planned to use analytical procedures for tests of inventory. These planned tests included comparing gross profit margins by month and reviewing for slow-moving items. Sessions believed that these tests will provide assurance of 40%. Substantive tests of details will include tests of inventory quantities, costs, and net realizable values at an interim date 2 months before year-end. Cutoff tests will be done at year-end. Inquiries and analytical procedures will be relied on for assurance about events between the interim audit date and fiscal year-end.

Required

a. Decide which of the following will likely be done under both a reducing control risk approach and a substantive approach:
   (1) Assess inherent risk.
   (2) Obtain an understanding of internal control.
   (3) Perform tests of controls.
   (4) Perform analytical procedures.
   (5) Assess planned detection risk.

b. What advantages does the reducing control risk approach Sessions plans to use have over the substantive approach previously used in the audit of McClain Plastics?

c. What advantages did the substantive approach have over the reducing control risk approach?

Part II

The engagement partner agreed with Sessions's recommended approach. In planning the audit evidence for detailed inventory tests, the audit risk model was applied with the following results:

$$TDR = \frac{AAR}{IR \times CR \times APR}$$

where:

$TDR =$ test of details risk
$AAR =$ acceptable audit risk
$IR =$ inherent risk
$CR =$ control risk
$APR =$ analytical procedures risk

Therefore, using Sessions's assessments and judgments as described previously,

$$TDR = \frac{.05}{1.0 \times .5 \times .6}$$

$$TDR = .17$$

Required

a. Explain what .17 means in this audit.

b. Calculate *TDR* assuming that Sessions had assessed control risk at 100% and all other risks as they are stated.

c. Explain the effect of your answer in requirement b. on the planned audit procedures and sample size in the audit of inventory compared with the .17 calculated by Sessions.

Part III

Although the planning went well, the actual testing yielded some surprises. When conducting tests of controls over acquisitions and additions to the perpetual inventory, the staff person performing the tests found that the exception rates for several key controls were significantly higher than expected. As a result, the staff person considered internal control to not be operating effectively, supporting an 80% control risk rather than the 50% level used. Accordingly, the staff person "reworked" the audit risk model as follows:

$$TDR = \frac{.05}{1.0 \times .8 \times .6}$$

$$TDR = .10$$

A 10% test of details risk still seemed to the staff person to be in the "moderate" range, so he recommended no increase in planned sample size for substantive tests.

Required

Do you agree with the staff person's revised judgments about the effect of tests of controls on planned substantive tests? Explain the nature and basis of any disagreement. Also, describe the implications of these results on the auditor's report on internal control over financial reporting.

13-36 (Objectives 13-4, 13-5) Gale Brewer, CPA, has been the partner in charge of the audit of Merkle Manufacturing Company, a nonpublic company, for 13 years. Merkle has had excellent growth and profits in the past decade, primarily as a result of the excellent leadership provided by Bill Merkle and other competent executives. Brewer has always enjoyed a close relationship with the company and prides himself on having made several constructive comments over the years that have aided in the success of the firm. Several times in the past few years, Brewer's CPA firm has considered rotating a different audit team on the engagement, but this has been strongly resisted by both Brewer and Merkle.

For the first few years of the audit, internal controls were inadequate and the accounting personnel had inadequate qualifications for their responsibilities. Extensive audit evidence was required during the audit, and numerous adjusting entries were necessary. However, because of Brewer's constant prodding, internal controls improved gradually and competent personnel were hired. In recent years, there were normally no audit adjustments required, and the extent of the evidence accumulation was gradually reduced. During the past 3 years, Brewer was able to devote less time to the audit because of the relative ease of conducting the audit and the cooperation obtained throughout the engagement.

In the current year's audit, Brewer decided that the total time budget for the engagement should be kept approximately the same as in recent years. The senior in charge of the audit, Phil Warren, was new on the job and highly competent, and he had the reputation of being able to cut time off the budget. The fact that Merkle had recently acquired a new division through merger will probably add to the time, but Warren's efficiency will probably compensate for it.

The interim tests of controls took somewhat longer than expected because of the use of several new assistants, a change in the accounting system to computerize the inventory and other accounting records, a change in accounting personnel, and the existence of a few more errors in the tests of the system. Neither Brewer nor Warren was concerned about the budget deficit, however, because they could easily make up the difference at year-end.

At year-end, Warren assigned the responsibility for inventory to an assistant who also had not been on the audit before but was competent and extremely fast at his work. Even though the total value of inventory increased, he reduced the size of the sample from that of other years because there had been few errors in the preceding year. He found several items in the sample that were overstated as a result of errors in pricing and obsolescence, but the combination of all of the errors in the sample was immaterial. He completed the tests in 25% less time than the preceding year. The entire audit was completed on schedule and in slightly less time than the preceding year. There were only a few adjusting entries for the year, and only two of them were material. Brewer was extremely pleased with the results and wrote a letter to Warren and the inventory assistant complimenting them on the audit.

Six months later, Brewer received a telephone call from Merkle and was informed that the company was in serious financial trouble. Subsequent investigation revealed that the inventory had been significantly overstated. The major cause of the misstatement was the inclusion of obsolete items in inventory (especially in the new division), errors in pricing as a result of the new computer system, and the inclusion of nonexistent inventory in the final inventory listing. The new controller had intentionally overstated the inventory to compensate for the reduction in sales volume from the preceding year.

Required

a. List the major deficiencies in the audit and state why they took place.

b. What things should have been apparent to Brewer in the conduct of the audit?

c. If Brewer's firm is sued by creditors, what is the likely outcome?

RESEARCH PROBLEM 13-1: ASSESSING EFFECTS OF EVIDENCE MIX

Auditors develop overall audit plans to ensure that they obtain sufficient appropriate audit evidence. The timing and extent of audit procedures auditors use is a matter of professional judgment, which depends upon a number of factors. Decisions about the mix of audit procedures and the timing of procedures significantly impact the date on which the audit report is issued. Visit the company Web sites for Google, Inc. (www.google.com), Cisco Systems, Inc. (www.cisco.com), and McDonald's Corporation (www.aboutmcdonalds.com). Search under "Investor Relations" for the most recent annual report and locate the independent auditor's report.

Required

a. Identify the year-end for each company. Did any company have a year-end other than December 31st? Will the company's year-end have any impact on the audit procedures used and their timing?

b. Indicate the number of days between each company's year-end and the date of the audit report. What factors may impact the number of days to issue the audit report?

c. Based on the number of days between each company's year-end and the date of the audit report, and your knowledge of each company's operations, on which audit do you think the auditors placed the greatest reliance on substantive tests of details of balances? Explain.