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American Institute of Certified Public Accountants. Auditing Revenues Steering Task Force

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AICPA Audit Guide

AUDITING REVENUE IN CERTAIN INDUSTRIES

*New Edition
as of June 1, 2001*

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

AICPA

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NOTICE TO READERS

This AICPA Audit Guide has been developed under the supervision of the AICPA Auditing Revenues Steering Task Force to assist auditors in auditing assertions about revenue. The AICPA Auditing Standards Board has found the descriptions of auditing standards, procedures, and practices in this Audit Guide to be consistent with existing standards covered by rule 202 of the AICPA Code of Professional Conduct. Descriptions of auditing standards, procedures, and practices in Audit Guides are not as authoritative as pronouncements of the Auditing Standards Board, but AICPA members should be aware that they may have to justify a departure from such descriptions if the quality of their work is questioned.

This Audit Guide also includes descriptions of accounting principles related to revenue recognition. The descriptions may refer to a Financial Accounting Standards Board Statement, an Accounting Principles Board Opinion, or an Accounting Research Bulletin, all of which are pronouncements enforceable under rule 203 of the AICPA Code of Professional Conduct, or to other authoritative accounting pronouncements, such as AICPA Statements of Position and FASB Emerging Issues Task Force consensuses. This Audit Guide is intended to be helpful in pointing to generally accepted accounting principles related to revenue recognition; however, it does not have the authority of the original accounting pronouncements. Therefore, readers should not use this Guide as their source of accounting guidance for revenue recognition but should instead rely on the referred original accounting pronouncements in their entirety.

James S. Gerson, *Chair*
Auditing Standards Board

Preface

Revenue recognition continues to pose significant audit risk to auditors and has contributed to a perceived erosion in the integrity of the financial reporting process. In recent years, several high-profile incidents of improper revenue recognition attracted the attention of the business media and led to unflattering coverage. A substantial portion of recent litigation against accounting firms reported to the AICPA Securities and Exchange Commission (SEC) Practice Section Quality Control Inquiry Committee cite revenue recognition issues. In March 1999, the Committee of Sponsoring Organizations of the Treadway Commission released *Fraudulent Financial Reporting: 1987–1997, An Analysis of U.S. Public Companies*. The report examines incidents of fraudulent financial reporting alleged by the SEC in Accounting and Auditing Enforcement Releases issued between January 1987 and December 1997. More than half of the frauds involved overstating revenues by recording them either fictitiously or prematurely. In August 2000, the Public Oversight Board's Panel on Audit Effectiveness, established in October 1998 in response to a request by the SEC, published its final report. The report included recommendations that the Financial Accounting Standards Board and the AICPA's Auditing Standards Board provide additional guidance on revenue.

The implications are wide reaching. Investor confidence has driven the unparalleled success of the U.S. capital markets, and a key component in creating that confidence is the confirming role of audited financial statements. In this Guide, the AICPA's intent is to help auditors fulfill their professional responsibilities with regard to auditing assertions about revenue. This Guide—

- Discusses the responsibilities of management, boards of directors, and audit committees for reliable financial reporting.
- Summarizes key accounting guidance regarding whether and when revenue should be recognized in accordance with generally accepted accounting principles.
- Identifies circumstances and transactions that may signal improper revenue recognition.
- Summarizes key aspects of the auditor's responsibility to plan and perform an audit under generally accepted auditing standards.
- Describes procedures that the auditor may find effective in limiting audit risk arising from improper revenue recognition.
- Provides guidance on auditing revenue transactions in selected industries not covered by existing AICPA Audit and Accounting Guides.

The primary focus of this publication is revenue recognition for sales of goods and services (other than lending activities) by for-profit enterprises in the ordinary course of business. Revenue recognition for governmental and not-for-profit entities is beyond the scope of this publication.

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Chapter 1

Overview: Audit Issues in Revenue Recognition

Responsibility for Reliable Reporting

1.01 This chapter discusses the responsibilities of management, boards of directors, and audit committees for reliable financial reporting. It also provides an overview of the key accounting guidance relevant to revenue recognition for sales of goods and services, identifies circumstances and transactions that may signal improper revenue recognition, and summarizes key aspects of the auditor's responsibility to plan and perform an audit under generally accepted auditing standards (GAAS).

1.02 Management is responsible for the preparation and fair presentation of financial statements, including reported revenues. Among the financial reporting objectives relevant to assertions about revenue are the following.

- Recorded sales during the accounting period represent actual shipments of goods or rendering of services to customers who have made firm, enforceable commitments to purchase such goods or services.
- Deferred revenues are recognized in the appropriate period when shipments are made, services are rendered, or other conditions requiring deferral are no longer present.
- Estimated amounts of reserves for sales returns, provision for customer rebates and dealer or customer discounts, and allowances for uncollectible receivables are reasonable.
- Policies for revenue recognition are adequately disclosed.¹

1.03 Misstatements in reported revenue may result from error or from faulty judgment in the application of accounting principles. Revenue recognition principles sometimes are difficult to apply, especially in complex or unusual transactions, and often vary by industry. Management may inappropriately use "aggressive" accounting policies that reflect their understanding of the economic substance of the transactions and of industry practice. Misstatements in revenue also may arise when entity personnel at various levels participate in schemes, frequently with the collusion of others within the entity or with customers or suppliers, to overstate revenues intentionally. Intentional misstatement of the financial statements is fraudulent financial reporting.

1.04 This section of chapter 1, "Responsibility for Reliable Reporting," discusses the factors and conditions within an enterprise that may mitigate the risk that improper revenue recognition will occur, whether it is caused by error or fraud.

¹ Revenue recognition in this Guide is understood to be in accordance with generally accepted accounting principles (GAAP).

Deterrents to Improper Revenue Recognition

1.05 The National Commission on Fraudulent Financial Reporting, called the Treadway Commission (the Commission) after its Chairman, James C. Treadway, Jr., undertook a study from 1985 to 1987 to identify causal factors that can lead to fraudulent financial reporting and to develop recommendations to reduce its incidence. The Commission's recommendations also are relevant for reducing the incidence of misstatements in financial reporting that result from errors, including the unintentional misapplication of accounting principles. Some of the Commission's recommendations for public companies, including recommendations that address the tone set by top management, the audit committee, the internal audit function, and internal control, are discussed in the following paragraphs.

Tone at the Top

1.06 The Commission stated the following:

The tone set by top management—the corporate environment or culture within which financial reporting occurs—is the most important factor contributing to the integrity of the financial reporting process. Notwithstanding an impressive set of written rules and procedures, if the tone set by management is lax, fraudulent financial reporting is more likely to occur.²

1.07 The Commission recommended that top management and the board of directors develop, communicate, and enforce a code of corporate conduct to foster a strong ethical climate within the entity.

Audit Committee of the Board of Directors

1.08 The Commission recommended that the audit committee of the board of directors be composed of independent (outside) directors. It also recommended that a written charter set forth their duties and responsibilities, and that they be given adequate resources and authority to fulfill their role of informed, vigilant, and effective overseers of the financial reporting process and the company's internal controls. An effective audit committee can help deter improper conduct by management. The important role of the audit committee in corporate governance also has been discussed in reports by the Public Oversight Board of the Securities and Exchange Commission (SEC) Practice Section of the AICPA.³ In 1998, Arthur Levitt, chairman of the SEC, and Lynn Turner, its chief accountant, reiterated the call for the empowerment of audit committees that function as qualified, independent, committed, and tough-minded guardians of investor interests and corporate accountability. In response, the New York Stock Exchange (NYSE) and the National Association of Securities Dealers (NASD) sponsored a Blue Ribbon Committee (BRC) drawn from the various constituencies of the financial community to study the effectiveness of audit committees and to make concrete recommendations for improving audit committee oversight of the financial reporting process. The *Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees* was issued in February 1999. It included recommendations that the NYSE, the NASD, the SEC, and the

² *Report of the National Commission on Fraudulent Financial Reporting*, October 1987, p. 32.

³ These reports are *In the Public Interest: Issues Confronting the Accounting Profession*, published in March 1993, and *Strengthening the Professionalism of the Independent Auditor*, a Report to the Public Oversight Board of the AICPA Securities and Exchange Commission (SEC) Practice Section, from the Advisory Panel on Auditor Independence, published in September 1994.

Auditing Standards Board (ASB) take various actions to strengthen the independence of the audit committee and make it more effective, and to address mechanisms for accountability among the audit committee, the outside auditors, and management.⁴

Internal Audit Function

1.09 The Commission recommended that companies maintain an effective internal audit function that is adequately staffed with qualified personnel appropriate to the size and nature of the company. To enhance the objectivity of the internal audit function, the chief internal auditor should have direct access and report regularly to the company's chief executive officer and to the audit committee. An important responsibility of the internal audit function is to monitor the performance of an entity's controls.

Internal Control

1.10 The Commission also recommended that a framework of internal control be developed to enable management to identify and assess the risks of fraudulent financial reporting, and to design and implement internal controls that will provide reasonable assurance that fraudulent financial reporting will be prevented or subject to early detection. The outcome of this recommendation is *Internal Control—Integrated Framework*, a report published in 1992 by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission (the COSO Report). The COSO Report describes internal control as a process consisting of five interrelated components that are necessary for entity objectives, including reliable financial reporting, to be achieved. The five components of internal control are the control environment, risk assessment, control activities, information and communication, and monitoring. Echoing the Commission's conclusion, the COSO Report states that the control environment sets the tone of an organization, influencing the control consciousness of its people, and is the foundation for all other components of internal control.

1.11 In addition, the Foreign Corrupt Practices Act of 1977 establishes a legal requirement that every SEC registrant devise and maintain a system of internal accounting controls sufficient to provide reasonable assurance that certain objectives are met, including that transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles (GAAP). Some companies document the policies that management has established to comply with requirements of the Foreign Corrupt Practices Act and also require their employees, including the sales and marketing organizations, to certify that they have read and complied with the company's policies.

Internal Control and Assertions About Revenue

1.12 The significant financial statement accounts relating to management's assertions about revenue include sales, sales returns and allowances,

⁴ In December 1999, the Auditing Standards Board (ASB) issued Statement on Auditing Standards (SAS) No. 90, *Audit Committee Communications* (AICPA, *Professional Standards*, vol. 1, AU secs. 380 and 722), in response to recommendations of the Blue Ribbon Committee (BRC). SAS No. 90 amends SAS No. 61, *Communications With Audit Committees* (AICPA, *Professional Standards*, vol. 1, AU sec. 380) and SAS No. 71, *Interim Financial Information* (AICPA, *Professional Standards*, vol. 1, AU sec. 722). Among other things, SAS No. 90 requires an auditor of SEC registrants to discuss with audit committees the auditor's judgments about the quality, not just the acceptability, of the company's accounting principles and underlying estimates. It encourages a three-way discussion among the auditor, the management, and the audit committee.

service revenue, accounts receivable and related allowance accounts, deferred revenues, and cash. Management is responsible for the design, implementation, and effective operation of internal control over transactions in these accounts, including the development of significant accounting estimates and disclosures, in order to achieve the financial reporting objectives that were discussed in paragraph 1.02. Internal control with respect to assertions about revenue is a process that involves management's—

- Identification, analysis, and management of risks that may cause misstatements of accounts involving assertions about revenue, including a consideration of how significant estimates are developed, the possibility that unauthorized transactions may be recorded, and the possibility that authorized transactions may be recorded erroneously or omitted.
- Design and implementation of an information system, which includes the accounting system, and the methods and records established to accurately record, process, summarize, and report transactions, as well as the processes used to prepare significant accounting estimates and disclosures, regarding assertions about revenue.
- Design and implementation of control activities, including documented policies and procedures applied in the processing of transactions that flow through the accounting system in order to prevent, or promptly detect, misstatements in revenue.
- Monitoring of the design and operating effectiveness of internal controls over assertions about revenue to determine if they are operating as intended, and if not, to take corrective action.

1.13 Underlying the above, the control environment is the most significant factor influencing the integrity of reported revenue. The control environment includes such factors as integrity and ethical values, management's philosophy and operating style, board of directors or audit committee participation, commitment to competence, and assignment of authority and responsibility.

1.14 The COSO Report notes that internal control has inherent limitations. The benefits of controls must be considered relative to costs due to resource constraints. Another limiting factor is faulty human judgment in decision making, or mistakes in application, on the part of a person responsible for establishing or performing a control. Furthermore, controls can be circumvented by the collusion of two or more people and by management override.

1.15 Both the Treadway Commission and the COSO Report stress the importance of management establishing and maintaining an appropriate tone at the top. An effective control environment fosters and in turn is reinforced by an effective audit committee, internal audit function, and internal control process. Collectively, these functions support management in achieving its objective of fair presentation of financial information.

Summary of Selected Accounting Literature on Revenue Recognition

1.16 As noted previously, revenue recognition for purposes of this Guide is understood to mean in accordance with GAAP. This section of chapter 1 summarizes some of the key authoritative accounting literature relevant to revenue recognition for sales of goods and services, including the conceptual

basis for revenue recognition and also specific revenue recognition guidance for right of return, bill and hold, contract accounting, and sales of software, among others. The following paragraphs are not intended to be a substitute for the original pronouncements.

Conceptual Basis for Revenue Recognition

1.17 The conceptual basis for revenue recognition is contained in Financial Accounting Standards Board (FASB) Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*. Paragraph 83 states that recognition of revenue involves consideration of two factors, (a) being realized or realizable and (b) being earned. Paragraph 83b states:

Revenues are not recognized until earned. An entity's revenue-earning activities involve delivering or producing goods, rendering services, or other activities that constitute its ongoing major or central operations, and revenues are considered to have been earned when the entity has substantially accomplished what it must do to be entitled to the benefits represented by the revenues. [Footnote omitted.]

Paragraph 84a states that revenues from manufacturing and selling activities are commonly recognized at time of sale, usually meaning delivery.

Revenue Recognition When Right of Return Exists

1.18 FASB Statement of Financial Accounting Standards No. 48, *Revenue Recognition When Right of Return Exists*, establishes accounting and reporting standards for sales of a product when the buyer has the right to return the product. Paragraph 6 provides that, in such circumstances, revenue from the sales transaction should be recognized at time of sale only if *all* of the following conditions are met.

- a. The seller's price to the buyer is substantially fixed or determinable at the date of sale.
- b. The buyer has paid the seller, or the buyer is obligated to pay the seller and the obligation is not contingent on resale of the product.
- c. The buyer's obligation to the seller would not be changed in the event of theft or physical destruction or damage of the product.
- d. The buyer acquiring the product for resale has economic substance apart from that provided by the seller. [Footnote omitted.]
- e. The seller does not have significant obligations for future performance to directly bring about resale of the product by the buyer.
- f. The amount of future returns³ can be reasonably estimated (paragraph 8).

³ Exchanges by ultimate customers of one item for another of the same kind, quality, and price (for example, one color or size for another) are not considered returns for purposes of this Statement.

1.19 If the above conditions are not met, sales recognition should be postponed until the right of return substantially expires or until such time that the conditions are met.

1.20 If revenue is recognized at time of sale because the above conditions are met, FASB Statement No. 48 requires that costs or losses that may be expected in connection with returns must be accrued in accordance with FASB Statement No. 5, *Accounting for Contingencies*. Sales revenue and cost of sales reported in the income statement should be reduced to reflect estimated returns.

1.21 Paragraph 8 of FASB Statement No. 48 describes a number of factors that may impair (but not necessarily preclude) the ability to make a reasonable estimate of the amount of future returns. Among those factors are the susceptibility of the product to significant external factors (for example, obsolescence or changes in demand); the absence of or lack of relevance of historical experience to the circumstances (for example, if a product, market, or customer is new); the length of the return period; and the absence of a large volume of relatively homogeneous transactions.

1.22 Paragraph 4 of FASB Statement No. 48 notes that the Statement does not apply to—

- (a) accounting for revenue in service industries if part or all of the service revenue may be returned under cancellation privileges granted to the buyer,
- (b) transactions involving real estate or leases, or (c) sales transactions in which a customer may return defective goods, such as under warranty provisions.

Contract Accounting

Accounting Research Bulletin No. 45, Long-Term Construction-Type Contracts

1.23 Accounting Research Bulletin (ARB) No. 45, *Long-Term Construction-Type Contracts*, describes the advantages and disadvantages of the percentage-of-completion and completed-contract methods of accounting for long-term construction-type contracts. The standard establishes a preference for the use of percentage-of-completion accounting when estimates of costs to complete and extent of progress toward completion of long-term contracts are reasonably dependable. The advantages of percentage-of-completion are the periodic recognition of income as it is earned, and the reflection of the status of uncompleted contracts that is provided through the current estimates of costs to complete or of progress toward completion. The disadvantage is that it is necessarily dependent upon estimates and, therefore, subject to uncertainty.

1.24 In the absence of reasonably dependable estimates, or if inherent hazards cause forecasts to be doubtful, the completed contract method should be used. The completed-contract method does not permit the recording of income before completion, or substantial completion, of the contract. Therefore, the recording of income is not subject to the uncertainties of estimates, but the disadvantage is that the completed-contract method does not reflect current performance when the contract extends into more than one accounting period. ARB No. 45 requires disclosure of the method followed.

Statement of Position 81-1, Accounting for Performance of Construction-Type and Certain Production-Type Contracts

1.25 Statement of Position (SOP) 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*, provides more detailed guidance on the application of ARB No. 45. It expands the scope to

include accounting for the performance of contracts for which specifications are provided by the customer for the construction of facilities or the production of goods or for the provision of related services. SOP 81-1 states that use of the percentage-of-completion or the completed-contract method of accounting should not be acceptable alternatives for the same circumstances. Determination of which of the two methods is preferable should be based on a careful evaluation of the circumstances. It identifies the circumstances appropriate to each of the methods, the bases of applying the methods, and the reasons for the recommendations.

1.26 *Percentage-of-completion method.* SOP 81-1 concludes that the percentage-of-completion method is the preferable accounting policy when reasonably dependable estimates of the extent of progress toward completion, contract revenues, and contract costs can be made. Paragraph 23 also requires that all of the following conditions exist.

- Contracts executed by the parties normally include provisions that clearly specify the enforceable rights regarding goods or services to be provided and received by the parties, the consideration to be exchanged, and the manner and terms of settlement.
- The buyer can be expected to satisfy his obligations under the contract.
- The contractor can be expected to perform his contractual obligations.

1.27 SOP 81-1 states that the ability to produce reasonably dependable estimates is an essential element of the contracting business and persuasive evidence to the contrary is necessary to overcome that presumption. A contractor's estimates of total contract revenue and total contract costs should be regarded as reasonably dependable if the minimum total revenue and the maximum total cost can be estimated with a sufficient degree of confidence to justify the contractor's bid on contracts.

1.28 *Completed-contract method.* This method may be used in circumstances in which financial position and results of operations would not vary materially from those resulting from the use of the percentage-of-completion method, for example, when an entity has primarily short-term contracts. The completed-contract method is preferable in circumstances in which estimates cannot meet the criteria for reasonable dependability or in which there are inherent hazards. Examples of inherent hazards are contracts whose validity is seriously in question (that is, which are less than fully enforceable), contracts whose completion may be subject to the outcome of pending legislation or pending litigation, or contracts exposed to the possibility of the condemnation or expropriation of the resulting properties.

1.29 *Determining the profit center.* The basic presumption should be that each contract is the profit center for revenue recognition, cost accumulation, and income measurement. That presumption may be overcome only if a contract or a series of contracts meets the conditions described for combining or segmenting contracts. Combining contracts for profit recognition purposes may occur when a group of contracts is so closely related that the contracts are, in effect, parts of a single project with an overall profit margin, such as when a group of contracts has been negotiated as a package with the objective of achieving an overall profit. In SOP 81-1, paragraphs 37 and 38 detail specific criteria that must be met for contracts to be combined for accounting purposes.

1.30 A single contract or a group of contracts that otherwise meet the test for combining may include several elements or phases, each of which the

contractor negotiated separately with the same customer and agreed to perform without regard to the performance of the others. A project consisting of a single contract or a group of contracts with segments that have different rates of profitability may be segmented if it meets specific criteria described in paragraphs 40, 41, or 42 of SOP 81-1.

1.31 *Measuring progress on contracts.* The meaningful measurement of the extent of progress toward completion is essential because this factor is used in determining the amounts of estimated contract revenue and the estimated gross profit that will be recognized in any given period. A number of acceptable methods are used including cost-to-cost, efforts-expended, units-of-delivery, and units-of-work-performed. Use of any given method depends on whether input measures (terms of efforts devoted to a contract) or output measures (terms of results achieved) are used. Output measures are generally the best method of progress toward completion, but often they cannot be established and input measures must be used. The methods selected should be applied consistently to all contracts having similar characteristics. The acceptability of the results of input or output measures should be periodically reviewed and confirmed by alternative measures that involve observation and inspection, perhaps by comparison to results of calculations based on physical observations by engineers, architects, or similarly qualified personnel.

1.32 *Computation of income earned under the percentage-of-completion method.* Total estimated gross profit on a contract, the difference between total estimated contract revenue and total estimated contract cost, must be determined before the amount earned on the contract for a period can be determined. The portion of total revenue earned or the total amount of gross profit earned to date is determined by the measurement of the extent of progress toward completion using one of the methods discussed above. The computation of income earned for a period involves a determination of the portion of total estimated contract revenue that has been earned to date (earned revenue) and the portion of total estimated contract cost related to that revenue (cost of earned revenue). SOP 81-1 discusses two acceptable alternative approaches to determining earned revenue and cost of earned revenue.

1.33 *Revised estimates.* Estimates of contract revenue, costs to complete, and the extent of progress toward completion must be continually reevaluated throughout the life of a contract. SOP 81-1 requires changes in estimates to be accounted for in the period of change as described in paragraph 31a of Accounting Principles Board (APB) Opinion No. 20, *Accounting Changes*.

1.34 *Provisions for anticipated losses on contracts.* SOP 81-1 states that provisions for losses should be made in the period in which they become evident under either the percentage-of-completion method or the completed-contract method.

1.35 *Disclosures.* SOP 81-1 requires disclosure of the basic method of accounting used for contracts, departures from the basic accounting policy, methods of measuring extent of progress toward completion for contracts accounted for using the percentage-of-completion method, and specific criteria used to determine when a contract is substantially completed for contracts accounted for using the completed-contract method. It notes that APB Opinion 20 recommends disclosure of the effect of significant revisions of estimates if the effect is material.

SOP 97-2, Software Revenue Recognition⁵

1.36 SOP 97-2, *Software Revenue Recognition*, as amended by SOP 98-9, *Modification of SOP 97-2, Software Revenue Recognition, With Respect to Certain Transactions*, provides guidance on applying GAAP in recognizing revenue on software transactions. Key provisions are discussed in the following paragraphs.

1.37 If an arrangement to deliver software or a software system does not require significant production, modification, or customization of software, revenue should be recognized when all of the following criteria are met.

- Persuasive evidence of an arrangement exists.
- Delivery has occurred.
- The vendor's fee is fixed or determinable.
- Collectibility is probable.

Persuasive Evidence of an Arrangement Exists

1.38 If the vendor has a customary business practice of using written contracts, evidence of the arrangement is provided only by a contract signed by both parties. Vendors that do not rely on signed contracts should have other forms of evidence to document the transaction, such as a purchase order or online authorization. Even if all other requirements in the SOP for recognition of revenue are met (including delivery), revenue should not be recognized on any element of the arrangement unless persuasive evidence of an arrangement exists.

Delivery Has Occurred

1.39 The principle of not recognizing revenue before delivery applies whether the customer is a user or a reseller. For software that is delivered electronically, delivery has been met when the customer takes possession of the software via a download or has been provided with access codes that allow the customer to take immediate possession of the software on its hardware pursuant to an agreement or purchase order for the software.

1.40 If uncertainty exists about customer acceptance after delivery, license revenue should not be recognized until acceptance occurs. Delivery should not be considered complete unless the destination is the customer's place of business or another site specified by the customer. If the customer specifies an intermediate site, but a substantial portion of the fee is not payable until the delivery by the vendor to another site specified by the customer, revenue should not be recognized until delivery is made to that other site. Revenue from transactions involving delivery agents of the vendor should be recognized when the software is delivered to the customer, not to the delivery agent.

The Vendor's Fee Is Fixed or Determinable and Collectibility Is Probable

1.41 A software licensing fee is not fixed or determinable if it is based on the number of units distributed or copied, or on the expected number of users of the product. If an arrangement includes rights of return or rights to refunds

⁵ Also see chapter 2 of this Guide, "Auditing Revenue Transactions in the Computer Software Industry."

without return, conditions that must be met for the vendor to recognize revenue include that the amount of future returns or refunds can be reasonably estimated in accordance with FASB Statement No. 48. *Any* extended payment terms may indicate that the fee is not fixed or determinable. If payment of a significant portion of the fee is not due until after expiration of the license or more than twelve months after delivery, the licensing fee should be *presumed* not to be fixed or determinable unless the vendor can demonstrate a standard business practice of using long-term or installment contracts and a history of successfully collecting under the original payment terms without making concessions. If it cannot be concluded that a fee is fixed or determinable at the outset of an arrangement, revenue should be recognized as payments become due.

1.42 For reseller arrangements, such factors as the following may indicate that the fixed or determinable fees and collectibility criteria have not been met.

- Payment is substantially contingent on the reseller's success in distributing the product.
- Resellers may not be able to honor a commitment to make fixed and determinable payments until they collect cash from their customers.
- Uncertainties indicate the amount of future returns cannot be reasonably estimated.
- Distribution arrangements with resellers require the vendor to rebate or credit a portion of the fee if the vendor subsequently reduces its price for a product and the reseller still has rights with respect to that product (price protection).

1.43 Fees from licenses cancelable by the customer are neither fixed nor determinable until the cancellation privileges lapse. Fees from licenses with cancellation privileges that expire ratably over the license period are considered to become determinable ratably as the cancellation privileges lapse.

Contract Accounting

1.44 If an arrangement to deliver software or a software system, either alone or together with other products or services, requires significant production, modification, or customization of software, the entire arrangement should be accounted for in conformity with ARB No. 45, using the relevant guidance in SOP 81-1, unless criteria specified in SOP 97-2 for separate accounting for any service element are met. SOP 97-2 also provides guidance on the application of contract accounting in arrangements involving software.

Multiple-Element Arrangements

1.45 Software arrangements may consist of multiple elements, that is, additional software products, upgrades and enhancements, postcontract customer support (PCS), or services, including elements deliverable only on a when-and-if-available basis. If contract accounting does not apply, the vendor's fee must be allocated to the various elements based on vendor-specific objective evidence of fair values, regardless of any separate prices stated within the contract for each element.

1.46 Vendor-specific objective evidence of fair value is limited to the following:

- The price charged when the same element is sold separately
- For an element not yet being sold separately, the price established by management having the relevant authority

1.47 If sufficient vendor-specific objective evidence of fair values does not exist for the allocation of revenue to the various elements of an arrangement, all revenue from the arrangement should be deferred until such sufficient evidence exists, or until all elements have been delivered. Exceptions to this guidance are provided for PCS, services that do not involve significant customization, subscriptions, and arrangements in which the fee is based on the number of copies. In addition, SOP 98-9 amended this guidance for multiple-element arrangements in which there is vendor-specific objective evidence of the fair values of *all* undelivered elements, and vendor-specific objective evidence of fair value does not exist for one or more of the delivered elements. In such circumstances, it requires recognition of revenue in accordance with the *residual method*. Under the residual method, the total fair value of the undelivered elements is deferred, and the difference between the total arrangement fee and the amount deferred for the undelivered elements is recognized as revenue related to the delivered elements.

1.48 The portion of the fee allocated to an element should be recognized as revenue when all of the revenue recognition criteria have been met. In applying those criteria, the delivery of an element is considered not to have occurred if there are undelivered elements that are essential to the functionality of any delivered elements. In addition, no portion of the fee (including amounts otherwise allocated to delivered elements) meets the criterion of collectibility if the portion of the fee allocable to delivered elements is subject to forfeiture, refund, or other concession if the undelivered elements are not delivered. In order for the revenue related to an arrangement to be considered not subject to forfeiture, refund, or other concession, management must intend not to provide refunds or concessions that are not required under the provisions of the arrangement. The vendor's historical pattern of making refunds or other concessions that were not required under the original provisions (contractual or other) of other arrangements should be considered more persuasive than terms included in the arrangement that indicate that no concessions are required.

Service Elements

1.49 Separate accounting for a service element of an arrangement is required if both of the following criteria are met.

- The services are not essential to the functionality of any other element of the transaction.
- The services are described in the contract such that the total price of the arrangement would be expected to vary as the result of the inclusion or exclusion of the services.

1.50 SOP 97-2 provides comprehensive guidance on different kinds of multiple-element arrangements, PCS, services, and contract accounting. In addition, it includes appendixes with examples of the application of certain provisions of the SOP and a flowchart illustrating a decision process for recognizing revenue on software arrangements.

SEC Staff Accounting Bulletin No. 101, Revenue Recognition in Financial Statements

1.51 SEC Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, summarizes the staff's views in applying GAAP to selected revenue recognition issues. SABs are not rules or interpretations of

the SEC but, rather, represent the interpretations and practices followed by the SEC in administering the disclosure requirements of the federal securities laws.

1.52 SAB No. 101 presents various fact patterns, questions, and interpretive responses concerning whether the following criteria of revenue recognition are met.

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

1.53 *SAB No. 101: Revenue Recognition in Financial Statements—Frequently Asked Questions and Answers* addresses recurring questions from preparers, auditors, and analysts about how the guidance in SAB No. 101 should be applied to particular transactions.

1.54 SAB No. 101 reflects the basic principles of revenue recognition in GAAP and does not supersede any existing authoritative literature. Accordingly, while it is directed specifically to transactions of public companies, management and auditors of nonpublic companies may find the guidance therein helpful in analyzing revenue recognition matters.

Bill and Hold Sales

1.55 In a bill and hold transaction, a customer agrees to purchase the goods but the seller retains physical possession until the customer requests shipment to designated locations. Normally, such an arrangement does not qualify as a sale because delivery has not occurred. Under certain conditions, however, when a buyer has made an absolute purchase commitment and has assumed the risks and rewards of the purchased product but is unable to accept delivery because of a compelling business reason, bill and hold sales may qualify for revenue recognition.

1.56 SEC Accounting and Auditing Enforcement Release (AAER) No. 108 specifies certain conditions or criteria that a bill and hold transaction of a public company should meet in order to qualify for revenue recognition.⁶ In addition, it specifies certain factors that should be considered in evaluating whether a bill and hold transaction meets the requirements for revenue recognition. AAER No. 108 states the following.

[A] "bill and hold" transaction should meet the following conditions:

- (1) The risks of ownership must have passed to the buyer;
- (2) The customer must have made a fixed commitment to purchase the goods, preferably reflected in written documentation;
- (3) The buyer, not the seller, must request that the transaction be on a bill and hold basis. The buyer must have a substantial business purpose for ordering the goods on a bill and hold basis;
- (4) There must be a fixed schedule for delivery of the goods. The date for delivery must be reasonable and must be consistent with the buyer's business purpose (e.g., storage periods are customary in the industry);

⁶ The interpretive response to Question 3 of Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, also incorporates this guidance.

- (5) The seller must not have retained any specific performance obligations such that the earning process is not complete;
- (6) The ordered goods must have been segregated from the seller's inventory and not be subject to being used to fill other orders; and
- (7) The equipment must be complete and ready for shipment.

The above listed conditions are the important conceptual criteria which should be used in evaluating any purported bill and hold sale. This listing is not intended as a check list. In some circumstances, a transaction may meet all the factors listed above but not meet the requirements for revenue recognition.

In applying the above criteria to a purported bill and hold sale, the individuals responsible for preparation and filing of the financial statements should also consider the following factors:

- (1) The date by which the seller expects payment, and whether it has modified its normal billing and credit terms for this buyer;
- (2) The seller's past experiences with and pattern of bill and hold transactions;
- (3) Whether the buyer has the expected risk of loss in the event of a decline in the market value of the goods;
- (4) Whether the seller's custodial risks are insurable and insured;
- (5) Whether APB Opinion 21, pertaining to the need for discounting the related receivables, is applicable;³ and
- (6) Whether extended procedures are necessary in order to assure that there are no exceptions to the buyer's commitment to accept and pay for the goods sold, i.e., that the business reasons for the bill and hold have not introduced a contingency to the buyer's commitment.

³ Once the individuals responsible for preparation and filing of the financial statements have ascertained that the revenue may be properly recognized, they of course, have an on-going obligation to review for collectibility of the bill and hold receivable.

1.57 Although AAER No. 108 is directed specifically to transactions of public companies, management and auditors of nonpublic companies may find the guidance therein helpful in analyzing bill and hold transactions.

Sales of Real Estate

1.58 FASB Statement No. 66, *Accounting for Sales of Real Estate*, establishes standards for recognition of profit on all real estate transactions without regard to the nature of the seller's business. It includes extensive guidance for the recognition of profit both for retail land sales and for real estate transactions that are not retail land sales. The general requirements for recognition of all the profit at the date of sale on real estate sales other than retail land sales are set forth in paragraphs 3 through 5 of the Statement and are summarized in the following paragraphs. Similar to SOP 97-2, the guidance in FASB Statement No. 66 demonstrates the application of the concept of recognizing revenue when *earned* and when *realized* or *realizable* to a specific subject matter.

1.59 For sales of real estate other than retail land sales, use of the *full accrual method*, that is, recognition of all of the profit at the date of sale, depends on the existence of the following two conditions: (a) the profit is determinable, that is, the collectibility of the sales price is reasonably assured or an uncollectible amount can be estimated, and (b) the earnings process is virtually complete, that is, the seller is not obligated to perform significant tasks after the sale to earn the profit. Part or all of the profit should be deferred until both conditions exist.

1.60 Collectibility is demonstrated by the buyer's commitment to pay as supported by substantial initial and continuing investments in the property such that the buyer's risk of loss through default motivates the buyer to honor the obligation to the seller.

1.61 Profit on real estate transactions should not be recognized by the full accrual method unless all of the following criteria are met.

- A sale is consummated, meaning that the parties are bound by the terms of a contract, all consideration has been exchanged, any permanent financing for which the seller is responsible has been arranged, and all conditions precedent to closing have been performed. These four conditions usually are met at the time of closing, not when an agreement to sell has been signed or at a preclosing.
- The buyer's initial and continuing investments are adequate to demonstrate a commitment to pay for the property.
- The seller's receivable is not subject to future subordination.
- The seller has transferred to the buyer the usual risks and rewards of ownership in a transaction that is in substance a sale and does not have a substantial continuing involvement with the property.

1.62 FASB Statement No. 66 also provides guidance on accounting for sales of real estate in circumstances in which criteria for the full accrual method are not met and partial recognition of profit may be appropriate.

Financial Statement Disclosures

FASB Statement No. 57, Related Party Disclosures

1.63 FASB Statement No. 57, *Related Party Disclosures*, requires disclosures of material related-party transactions other than compensation arrangements, expense allowances, and other similar items in the ordinary course of business, unless the transactions are eliminated in the preparation of consolidated or combined financial statements. Transactions between related parties are considered to be related-party transactions even though they may not be given accounting recognition. Paragraph 2 states:

The disclosures shall include:³

- a. The nature of the relationship(s) involved
- b. A description of the transactions, including transactions to which no amounts or nominal amounts were ascribed, for each of the periods for which income statements are presented, and such other information deemed necessary to an understanding of the effects of the transactions on the financial statements
- c. The dollar amounts of transactions for each of the periods for which income statements are presented and the effects of any change in the method of establishing the terms from that used in the preceding period

- d. Amounts due from or to related parties as of the date of each balance sheet presented and, if not otherwise apparent, the terms and manner of settlement

³ In some cases, aggregation of similar transactions by type of related party may be appropriate. Sometimes, the effect of the relationship between the parties may be so pervasive that disclosure of the relationship alone will be sufficient. If necessary to the understanding of the relationship, the name of the related party should be disclosed.

1.64 Paragraph 3 states that transactions involving related parties cannot be presumed to be carried out on an arm's-length basis, and representations about related-party transactions should not imply that they were consummated on terms equivalent to arm's-length transactions unless such representations can be substantiated.

1.65 Paragraph 4 states that when a reporting enterprise is under common control with one or more other enterprises, the nature of that control relationship should be disclosed, even though there are no transactions between the enterprises, if the existence of that control could result in operating results or financial position of the reporting enterprise that differ significantly from those that would have been obtained if the enterprises were autonomous.

APB Opinion 22, Disclosure of Accounting Policies

1.66 APB Opinion 22, *Disclosure of Accounting Policies*, requires that a description of all significant accounting policies of the reporting entity should be included as an integral part of the financial statements. Disclosure of accounting policies should identify and describe the accounting principles followed by the reporting entity and the methods of applying those principles that materially affect the financial statements. Paragraph 12 states:

In general, the disclosure should encompass important judgments as to appropriateness of principles relating to recognition of revenue and allocation of asset costs to current and future periods; in particular, it should encompass those accounting principles and methods that involve any of the following:

- a. A selection from existing acceptable alternatives;
- b. Principles and methods peculiar to the industry in which the reporting entity operates, even if such principles and methods are predominantly followed in that industry;
- c. Unusual or innovative applications of generally accepted accounting principles (and, as applicable, of principles and methods peculiar to the industry in which the reporting entity operates).

SOP 94-6, Disclosure of Certain Significant Risks and Uncertainties

1.67 SOP 94-6, *Disclosure of Certain Significant Risks and Uncertainties*, requires entities to include in their financial statements disclosures about the nature of their operations and about the use of estimates in the preparation of financial statements. If certain criteria are met, it requires disclosures about certain significant estimates and the current vulnerability due to certain concentrations, for example, concentrations in the volume of business transacted with a particular customer or concentrations in revenue from particular products or services.

Other Sources of Revenue Recognition Guidance

1.68 The appendix to this Guide lists other sources of guidance for revenue recognition that covers specific subject matter or that is industry-specific. The appendix includes AICPA Industry Audit and Accounting Guides that provide auditing as well as accounting guidance.

1.69 In circumstances in which there is no specifically relevant authoritative accounting guidance and application by analogy does not seem appropriate, preparers and auditors may find it useful to refer to nonauthoritative sources, such as AICPA Audit Risk Alerts (some of which are also listed in the appendix) and articles in the *Journal of Accountancy* or other professional publications.

1.70 A source of nonauthoritative guidance on revenue recognition is the FASB's 1978 Invitation to Comment, *Accounting for Certain Service Transactions*. It provides that revenue from service transactions should be recognized based on performance. If performance consists of a single act, revenue should be recognized when that act takes place. If performance consists of multiple acts, revenue should be recognized based on the proportionate performance of each act. If the proportion of services to be performed in the final act is so significant to the whole service transaction that performance cannot be deemed to have taken place until that act is performed, revenue should be recognized when that act takes place. If there is a significant degree of uncertainty regarding realization of service revenue, revenue should not be recognized until collection. The Invitation to Comment also discusses the recognition of revenue in service transactions that involve nonrefundable initiation fees with subsequent periodic payments for future services, and on nonrefundable fees for the installation of equipment that is essential to providing future services with subsequent periodic payments for the services.

1.71 The FASB considered the Invitation to Comment in the development of its Concept Statements, and, subsequently, the Emerging Issues Task Force (EITF) has addressed some of the issues (see the appendix for a listing of EITF abstracts). Nevertheless, the Invitation to Comment was not further deliberated and its proposals are nonauthoritative.

Indicators of Improper Revenue Recognition

1.72 Management engages the independent auditor to express an opinion on the financial statements that management prepares in accordance with GAAP. Auditors should be alert to indicators of improper revenue recognition that may require special attention in performing the audit. This section of chapter 1 discusses risk indicators that may signal improper revenue recognition, including risk factors that relate to misstatements arising from fraudulent financial reporting, other issues that may require special consideration, and examples of specific transactions or events that may indicate improper accounting for revenue.

Risk Factors Relating to Misstatements Arising From Fraudulent Financial Reporting

1.73 Statement on Auditing Standards (SAS) No. 82, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 316), requires the auditor to specifically assess the risk of material misstatement due to fraud. It identifies examples of risk factors that relate to misstatements arising from fraudulent financial reporting and groups them into the following categories:

- Management's characteristics and influence over the control environment
- Industry conditions
- Operating characteristics and financial stability

1.74 Risk factors from each category that are particularly relevant to revenue recognition are summarized in the following paragraphs.

Management Characteristics and Influence Over the Control Environment

1.75 The COSO Report states that the control environment, including such factors as integrity and ethical values, and management's philosophy and operating style, sets the tone of an organization and is the foundation for all other components of internal control. Examples of risk factors relating to management's characteristics and influence over the control environment that are particularly relevant to revenue recognition include the following.

- Management has a motivation to engage in fraudulent financial reporting. Specific indicators might be the following.
 - A significant portion of management's compensation is represented by bonuses, stock options, or other incentives, the value of which is contingent upon the entity achieving unduly aggressive targets for operating results, financial position, or cash flow.
 - Management is excessively interested in maintaining or increasing the entity's stock price or earnings trend through the use of unusually aggressive accounting practices.
 - Management makes a practice of committing to analysts, creditors, and other third parties to achieve what appear to be unduly aggressive or clearly unrealistic forecasts.
- Management fails to display and communicate an appropriate attitude regarding internal control and the financial reporting process.

1.76 Risk factors relating to management's characteristics and influence over the control environment may vary depending on the nature of the business or the size of the entity. For example, management of a smaller entity may be motivated to engage in fraudulent financial reporting of revenue if failure to maintain a certain level of market capitalization or equity may trigger suspension from trading on a securities exchange.

Industry Conditions

1.77 The economic environment in which an entity operates may heighten the risk of misstatements of revenue arising from fraudulent financial reporting. Examples of risk factors relating to industry conditions include the following.

- There is a high degree of competition or market saturation, accompanied by declining margins.
- The industry is highly vulnerable to rapidly changing technology or rapid product obsolescence.
- There has been a general economic downturn in the industry, making it difficult to achieve budgeted or forecasted results.

Operating Characteristics and Financial Stability

1.78 The nature and complexity of the entity, its financial condition, and its profitability also may heighten the risk that the entity will engage in fraudulent financial reporting of revenue. Examples of risk factors relating to operating characteristics and financial stability include the following.

- There is an inability to generate cash flows from operations while reporting earnings and earnings growth.

- Assets, liabilities, revenues, or expenses are based on significant estimates that involve unusually subjective judgments or uncertainties, or that are subject to potential significant change in the near term in a manner that may have a financially disruptive effect on the entity. These might include ultimate collectibility of receivables, timing of revenue recognition, realizability of financial instruments based on the highly subjective valuation of collateral or difficult-to-assess repayment sources, or significant deferral of costs.
- Unusually rapid growth or profitability occurs, especially compared with that of other companies in the same industry.
- Loss of a major customer has created pressure to replace revenues and earnings.

Other Issues to Consider

Side Agreements

1.79 Side agreements are used to alter the terms and conditions of recorded sales transactions to entice customers to accept the delivery of goods and services. They may create obligations or contingencies relating to financing arrangements or to product installation or customization that may relieve the customer of some of the risks and rewards of ownership. Frequently, side agreements are hidden from the entity's board of directors and outside auditors, and only a very few individuals within an entity are aware that they exist.

1.80 Side agreements appear to be prevalent in high-technology industries, particularly the computer hardware and software segments. The terms they provide may preclude revenue recognition.

Channel Stuffing

1.81 Distributors and resellers sometimes delay placing orders until the end of a quarter in an effort to negotiate a better price on purchases from suppliers that they know want to report good sales performance. This practice may result in a normal pattern of increased sales volume at the end of a reporting period. An unusual volume of sales to distributors or resellers, particularly at or near the end of the reporting period, may indicate channel stuffing. Channel stuffing (also known as *trade loading*) is a marketing practice that suppliers sometimes use to boost sales by inducing distributors to buy substantially more inventory than they can promptly resell. Inducements to overbuy may range from deep discounts on the inventory to threats of losing the distributorship if the inventory is not purchased. Channel stuffing without appropriate provision for sales returns is an example of booking tomorrow's revenue today in order to window-dress financial statements. Channel stuffing also may be accompanied by side agreements with distributors that essentially negate some of the sales by providing for the return of unsold merchandise beyond the normal sales return privileges. Even when there is no evidence of side agreements, channel stuffing may indicate the need to increase the level of anticipated sales returns above historical experience.

Related-Party Transactions and Significant Unusual Transactions

1.82 Related-party transactions require special consideration because related parties may be difficult to identify, and related-party transactions may pose significant "substance over form" issues. Undisclosed related-party transactions may be used to fraudulently inflate earnings. Examples include the

recording of sales of the same inventory back and forth among affiliated entities that exchange checks periodically to “freshen” the receivables, and sales with commitments to repurchase that, if known, would preclude recognition of revenue. Although unusual material transactions, particularly close to year end, may be an indicator of related-party transactions, a series of sales may be executed with an undisclosed related party that individually are insignificant but in total are material.

1.83 Significant, unusual, or highly complex transactions resulting in revenue recognition that are executed with customers who are not related parties similarly require special consideration because they also may pose “substance over form” questions and may involve the collusion of the entity and the customer in a fraudulent revenue recognition scheme.

Nature of Business and Accounting for Revenue

1.84 Improper revenue recognition is not confined to any single industry. Risk factors also differ depending on the nature of the product or service and its distribution. Products that are sold to distributors for resale pose different risks than products or services that are sold to end users. Sales in high-technology industries where rapid product obsolescence is a significant issue pose different risks than sales of inventory with a longer life, such as farm or construction equipment, automobiles, trucks, and appliances. Although GAAP broadly govern revenue recognition, how those principles are applied in specific circumstances varies from industry to industry.

1.85 In gaining an understanding of the nature of the entity’s business, the auditor might consider factors that are relevant to the entity’s revenue recognition, such as the following:

- The appropriateness of an entity’s application of accounting principles in the context of the industry in which it operates
- Whether there has been a change in the company’s revenue recognition policy and, if so, why
- The company’s practice with regard to sales and payment terms, and whether there are deviations from industry norms or from the entity’s own practices, such as the following:
 - Sales terms that do not comply with the company’s normal policies
 - The existence of longer than expected payment terms or installment receivables
 - The use of nonstandard contracts or contract clauses with regard to sales
- Practices with regard to the shipment of inventory that could indicate the potential for misstatements of revenue or that could have other implications for the audit, such as the following.
 - The company’s shipping policy is inconsistent with previous years. For example, if an entity ships unusually large quantities of product at the end of an accounting period, it may indicate an inappropriate cutoff of sales. Alternatively, if a company that normally ships around-the-clock has stopped shipments one or two days before the end of the current accounting period, it may indicate that management is abandoning its normal operating policies in an effort to manage earnings, which may have broader implications for the audit.
 - Shipments recorded as revenue are sent to third-party warehouses rather than to customers.

- Shipments recorded as revenue result from billing for demonstration products that already are in the field.

Integrity of Evidence

1.86 Another issue requiring special consideration is the completeness and integrity of the entity's evidential matter supporting revenue recognition. Indicators that revenue may have been improperly recorded include—

- Responses from management or employees to inquiries about sales transactions or about the basis for estimating sales returns that are inconsistent, vague, or implausible.
- Documents to support sales transactions are missing.
- Bills of lading have been signed by company personnel rather than a common carrier.
- Documents such as shipping logs or purchase orders have been altered.

1.87 SAS No. 82, discussed in the following section of chapter 1 titled "Auditing Revenue Assertions," provides guidance on how the auditor's judgment about the risk of material misstatement due to fraud may affect the conduct of the audit.

Potential Accounting Misstatements

1.88 The following paragraphs discuss specific indicators relating to sales transactions that may evidence improper revenue recognition. A number of these examples represent obvious misstatements (and fraud as well). Others are transactions that merit further investigation to determine whether revenue has been improperly recorded. The indicators are categorized into sales that may fail as a result of the absence of an agreement, lack of delivery, or an incomplete earnings process.

Absence of an Agreement

1.89 A sale has not taken place if there is no actual, firm agreement between seller and buyer. Examples of obvious bogus sales are sales to non-existent customers, sales to existing customers in which terms such as quantities or prices have been altered, and shipments on canceled or duplicate orders. Indicators of sales that may be improperly recorded because of lack of agreement between buyer and seller include the following:

- The use of letters of intent in lieu of signed contracts or agreements
- Sales of merchandise that is shipped in advance of the scheduled shipment date without evidence of the customer's agreement or consent or documented request for such shipment
- Sales recorded upon shipment of a product to customers who have been given a free tryout period after which the customer can return the product with no obligation
- Recognition of sales when customers have unilateral cancellation or termination provisions
- Sales in which evidence indicates the customer's obligation to pay for the product is contingent on the following:
 - Resale to another (third) party (for example, sale to distributor or consignment sale)
 - Receipt of financing from another (third) party

Lack of Delivery

1.90 FASB Concepts Statement No. 5 states that revenues from manufacturing and selling activities are commonly recognized at the time of sale, usually meaning delivery. Indicators that delivery may not have occurred include the following.

- Sales are billed to customers before the delivery of goods and held by the seller (*bill and hold* or *ship in place* sales).
- Shipments are made after the end of the period (books kept open to record revenue for products shipped after the end of the period do not satisfy the delivery criterion for the current period).
- Shipments are made to a warehouse or other intermediary location without the instruction of the customer.
- Goods are preinvoiced before or in the absence of actual shipment.
- Partial shipments are made in which the portion not shipped is a critical component of the product.
- Purchase orders are recorded as completed sales.

Incomplete Earnings Process

1.91 FASB Concepts Statement No. 5 states that revenues are not recognized until earned. Indicators that sales have been recorded before the revenue has been earned include the following.

- There are sales in which evidence indicates the customer's obligation to pay for the merchandise depends on fulfillment by the seller of material unsatisfied conditions.
- Goods are preinvoiced while still in the process of being assembled.
- Shipments are sent to and held by freight forwarders pending return to the company for required customer modifications.
- There are sales that require substantial continuing vendor involvement after delivery of merchandise (for example, software sales requiring installation, debugging, extensive modifications, other significant support commitments).

Auditing Revenue Assertions

1.92 The objective of an audit of financial statements conducted in accordance with GAAS is to express an opinion on the financial statements. GAAS require that the auditor plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud.

1.93 No audit can be designed to provide absolute assurance that all revenue recorded by the client is appropriate or that fraudulent financial reporting is discovered. Nevertheless, an awareness of the conditions that increase audit risk, along with an appropriately skeptical response to issues identified during the planning process and during the performance of significant fieldwork, can help auditors increase the likelihood that either inadvertent or intentional material misstatements of revenue will be detected.

1.94 Revenue recognition issues continue to pose significant audit risk to auditors. The auditor's understanding of the entity's business—how it earns revenue, who is involved in the revenue process, how its controls over revenue

transactions may be overridden, and what its motivation to misstate revenue may be—is important in helping the auditor reduce that risk. Auditors need to pay particular attention to warning signals, such as those discussed in the previous section titled “Indicators of Improper Revenue Recognition,” that can be indicative of improper revenue recognition practices. To achieve the audit objective and satisfy the auditor’s responsibility, the audit needs to be planned and executed with an appropriate degree of professional skepticism.⁷ Additional audit procedures directed to the audit of revenues also may be needed to reduce the risk of failing to detect material misstatement of the financial statements to an acceptably low level. This section of the chapter on “Auditing Revenue Assertions” summarizes both authoritative and nonauthoritative guidance to help auditors achieve that objective.

The Audit Risk Model

1.95 SAS No. 47, *Audit Risk and Materiality in Conducting an Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 312.12), states that “the auditor should consider audit risk and materiality both in (a) planning the audit and designing auditing procedures and (b) evaluating whether the financial statements taken as a whole are presented fairly, in all material respects, in conformity with generally accepted accounting principles.”

1.96 Audit risk is the risk that the auditor may unknowingly fail to appropriately modify his or her opinion on financial statements that are materially misstated. Financial statements are materially misstated when they contain misstatements whose effect, individually or in the aggregate, is important enough to cause them not to be presented fairly, in all material respects, in conformity with GAAP. The auditor’s consideration of materiality is a matter of professional judgment and is influenced by his or her perception of the needs of a reasonable person who will rely on the financial statements.

1.97 The auditor should plan the audit so that audit risk will be limited to a low level that is, in his or her professional judgment, appropriate for expressing an opinion on the financial statements.

1.98 The nature, timing, and extent of the procedures to be applied on a particular engagement are a matter of the auditor’s professional judgment, based on the specific circumstances. However, the procedures adopted should be adequate to achieve the auditor’s specific objectives and reduce detection risk to a level acceptable to the auditor. The evidential matter obtained should be sufficient for the auditor to form conclusions concerning the validity of the individual assertions embodied in the components of financial statements and should provide a reasonable basis for his or her opinion.

1.99 An audit of financial statements is a cumulative process. The auditor may identify fraud risk factors or related-party transactions or other information relevant to the audit while performing procedures relating to acceptance or continuance of clients and engagements, during engagement planning, while obtaining an understanding of an entity’s internal control, or while conducting fieldwork. Such information may alter the auditor’s judgment about

⁷ Professional skepticism is characterized as “an attitude that includes a questioning mind and a critical assessment of audit evidence. The auditor uses the knowledge, skill, and ability called for by the profession of public accounting to diligently perform, in good faith and integrity, the gathering and objective evaluation of evidence.” See “Due Professional Care in the Performance of Work” (AICPA, *Professional Standards*, vol. 1, AU sec. 230.07).

the levels of inherent and control risks and his or her preliminary judgment about materiality. In such cases, the auditor may need to reevaluate the nature, timing, and extent of auditing procedures he or she plans to apply, based on the revised consideration of audit risk and materiality, for all or certain of the account balances or classes of transactions and related assertions.

Knowledge of the Business

1.100 SAS No. 22, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 311.06) states:

The auditor should obtain a level of knowledge of the entity's business that will enable him to plan and perform his audit in accordance with generally accepted auditing standards. That level of knowledge should enable him to obtain an understanding of the events, transactions, and practices that, in his judgment, may have a significant effect on the financial statements. The level of knowledge customarily possessed by management relating to managing the entity's business is substantially greater than that which is obtained by the auditor in performing the audit. Knowledge of the entity's business helps the auditor in:

- a. Identifying areas for special consideration.
- b. Assessing conditions under which accounting data are produced, processed, reviewed, and accumulated within the organization.
- c. Evaluating the reasonableness of estimates, such as valuation of inventories, depreciation, allowances for doubtful accounts, and percentage of completion of long-term contracts.
- d. Evaluating the reasonableness of management representations.
- e. Making judgments about the appropriateness of the accounting principles applied and the adequacy of disclosures.

1.101 The auditor's understanding of the client's business, its organization, and its operating characteristics is critical for planning and performing an effective audit. With regard to assertions about revenue, the auditor should consider obtaining information relating to the following matters:

- The kinds of products and services sold
- Whether seasonal or cyclical variations in revenue may be expected
- The marketing and sales policies customary for the client and the industry
- Policies regarding pricing, sales returns, discounts, extension of credit, and normal delivery and payment terms
- Who, particularly in the marketing and sales functions, is involved with processes affecting revenues including order entry, extension of credit, and shipping
- Whether there are compensation arrangements that depend on the company's recording of revenue, for example, whether the sales force is paid commissions based on sales invoiced or sales collected, and the frequency with which sales commissions are paid, might have an effect on the recording of sales at the end of a period

1.102 An understanding of the classes and categories of the entity's customers—whether there are sales to distributors or value-added resellers or to related parties—is important. For example, if sales to distributors are material, it is important to understand whether concessions have been made

in the form of return product rights or other arrangements in the distribution agreements the company has entered into. For example, distribution agreements in the high-technology industry might include such terms as price protection, rights of return for specified periods, rights of return for obsolete product, and cancellation clauses, such that the real substance of the agreement is that it results in consignment inventory.

1.103 Other factors that may be relevant to the auditor's understanding include whether the client assists distributors in placing product with end users, and how the company manages, tracks, and controls its inventory that is held by distributors. For example, the company may take physical inventories of product held by distributors or receive periodic inventory reports from distributors that are reconciled to the company's records.

1.104 The auditor should understand the accounting principles that are appropriate for the client's sales transactions, including special industry practices. In considering the appropriateness of recognizing revenue on sales to distributors, for example, the auditor should bear in mind that a sale is not final until the customer accepts the product and the risks and rewards of ownership have been transferred to the buyer.

1.105 Auditors may find procedures such as those described below useful in obtaining knowledge about an entity's sales transactions.

Inquiry

1.106 Inquiry of management is an effective auditing procedure in obtaining a knowledge of the entity and its internal controls. In situations involving unusual or complex revenue transactions, the auditor should consider making inquiries of representatives of the client's sales, marketing, customer service and returns departments, and other client personnel familiar with the transactions to gain an understanding of the nature of the transactions and any special terms that may be associated with them. Inquiries of legal staff also may be appropriate when sales contracts have nonstandard, unusual, or complex terms. Inquiry alone is not a sufficient auditing procedure, but information obtained from discussions with management and entity personnel may help the auditor identify matters that need to be corroborated with evidence obtained from other procedures, including confirmation from independent sources outside the entity.

Reading and Understanding Contracts

1.107 Reading and understanding the terms of sales contracts will help the auditor obtain an understanding of what the customer expects and what the company is committed to provide. In addition, reading the contents of the company's sales contract (and sales correspondence) files may provide evidence of side agreements.

Assignment of Personnel and Supervision

1.108 SAS No. 22 also discusses the supervision of personnel who are involved in the audit. An understanding of a client's business, its accounting policies and procedures, and the nature of its transactions with customers is useful in assessing the extent of experience or supervision required of the personnel assigned to audit revenue transactions. SAS No. 47 (AU sec. 312.17) states the following.

The knowledge, skill, and ability of personnel assigned significant engagement responsibilities should be commensurate with the auditor's assessment of the

level of risk for the engagement. Ordinarily, higher risk requires more experienced personnel or more extensive supervision by the auditor with final responsibility for the engagement during both the planning and the conduct of the engagement.

1.109 Unusual or complex transactions, related-party transactions, and sales transactions based on contracts with complex terms may signal the need for more experienced personnel assigned to those segments of the engagement, more extensive supervision, or the use of industry or other specialists. If the auditor lacks specialized knowledge to understand a particular transaction, he or she should consult with persons who do have the requisite knowledge.

Consideration of Internal Control Over Revenue Recognition

1.110 The COSO Report broadly defines internal control as a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives including reliable financial reporting. (See the section titled "Responsibility for Reliable Reporting.")

1.111 SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit*, as amended by SAS No. 78 and SAS No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319.25) states the following.

In all audits, the auditor should obtain an understanding of each of the five components of internal control sufficient to plan the audit. A sufficient understanding is obtained by performing procedures to understand the design of controls relevant to an audit of financial statements and determining whether they have been placed in operation. In planning the audit, such knowledge should be used to—

- Identify types of potential misstatement.
- Consider factors that affect the risk of material misstatement.
- Design tests of controls, when applicable.
- Design substantive tests.

1.112 The auditor's understanding of internal control over revenue transactions ordinarily will include the client's policies and procedures for receiving and accepting orders, extending credit, shipping goods, relieving inventory, billing and recording sales transactions, receiving and recording sales returns, and authorizing and issuing credit memos. The understanding ordinarily will include whether the entity has procedures for determining the proper cutoff of sales at the end of the accounting period. It also is important for the auditor to have an understanding of the computer applications and key documents (for example, purchase orders, shipping reports, bills of lading, invoices, credit memos) used during the processing of revenue transactions.

1.113 SAS No. 55, as amended (AU sec. 319.58), states that the auditor's knowledge of the design and operation of internal controls ordinarily is obtained through such procedures as inquiries of appropriate management, supervisory, and staff personnel; inspection of entity documents and records; and observation of entity activities and operations. For example, the auditor might obtain a knowledge of the design and operation of internal controls over the extension of credit to customers by performing procedures such as the following.

- Inquire of the credit manager and other credit department personnel about the entity's documented policies for approving sales orders before a shipping or production order is generated, including how—
 - New customers' creditworthiness is determined.
 - Standing customers' credit limits are established and reviewed.
 - Exceptions are handled if orders outside predetermined limits are received.
 - Management monitors the functioning of controls over the extension of credit.
- Inspect the documents that are used in various steps of the credit authorization process.
- Observe how the authorization of orders is executed by credit department personnel.

1.114 The auditor's understanding of internal control ordinarily will include such information as how the company monitors its sales contracts. Relevant aspects of this include the company's policy about management or other personnel who are authorized to approve nonstandard contract clauses; whether those personnel understand the accounting implications of changes to contractual clauses; and whether the entity enforces its policies regarding negotiation and approval of sales contracts and investigates exceptions. A lack of documented policies may give rise to a lack of compliance or inconsistent compliance with stated policies.

1.115 A sufficient understanding of the client's application of accounting principles, given the nature of its sales transactions, is important. The auditor needs to obtain an understanding of the client's financial reporting process to prepare the financial statements, including disclosures. This understanding ordinarily will include how the client develops significant estimates, such as reserves for sales returns and allowances for doubtful accounts. It also ordinarily will include considering the company's procedures for accounting for and disclosing related-party transactions. (See the discussion about related parties in the section "Transactions With Related Parties," which follows.)

1.116 Assessing control risk is the process of evaluating the *effectiveness* of an entity's internal control in preventing or detecting material misstatements in the financial statements. SAS No. 55, as amended, requires the auditor who assesses control risk below the maximum level to obtain sufficient evidential matter to support that assessed level. Because of the limitations inherent in any internal control system, there is always some risk that controls may fail or may be overridden. SAS No. 55, as amended, requires the auditor to perform substantive tests for significant account balances and transaction classes, regardless of the assessed level of control risk.

1.117 If evidence is obtained that operation of a control is ineffective, the assurance provided from substantive tests should increase. For example, if the auditor discovers that the entity's approval process for nonstandard sales contracts is ineffective, he or she may decide to confirm contract terms with major customers. If the auditor determines that a control has been intentionally overridden, SAS No. 82, discussed in the following paragraphs, provides guidance on how the audit may be affected.

Consideration of Fraud in a Financial Statement Audit

1.118 SAS No. 82, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 316), requires that the auditor

specifically assess the risk of material misstatement of the financial statements due to fraud and consider that assessment in designing the audit procedures to be performed. Fraud risk factors that are particularly relevant to the fraudulent financial reporting of revenue were discussed in the previous section of this chapter entitled “Indicators of Improper Revenue Recognition.” SAS No. 82 (AU sec. 316.13) also states the following.

As part of the risk assessment, the auditor also should inquire of management (a) to obtain management’s understanding regarding the risk of fraud in the entity and (b) to determine whether they have knowledge of fraud that has been perpetrated on or within the entity. Information from these inquiries could identify fraud risk factors that may affect the auditor’s assessment and related response. Some examples of matters that might be discussed as part of the inquiry are (a) whether there are particular subsidiary locations, business segments, types of transactions, account balances, or financial statement categories where fraud risk factors exist or may be more likely to exist and (b) how management may be addressing such risks.

1.119 SAS No. 82 (AU sec. 316.27) notes that the auditor’s judgments about the risk of material misstatement due to fraud may affect the audit in the ways discussed here.

Professional Skepticism

1.120 The application of professional skepticism in response to the auditor’s assessment of the risk of material misstatement due to fraud might include (a) increased sensitivity in the selection of the nature and extent of documentation to be examined in support of material transactions and (b) increased recognition of the need to corroborate management explanations or representations concerning material matters—such as further analytical procedures, examination of documentation, or discussion with others within or outside the entity.

Accounting Principles and Policies

1.121 The auditor may decide to consider further management’s selection and application of significant accounting policies, particularly those related to revenue recognition. The auditor may have a greater concern about whether the accounting principles selected and policies adopted are being applied in an inappropriate manner to create a material misstatement of the financial statements.

Controls

1.122 When a risk of material misstatement due to fraud relates to risk factors that have control implications, the auditor’s ability to assess control risk below the maximum may be reduced. The auditor’s consideration of internal control would need to include an added sensitivity to management’s ability to override such controls.

1.123 SAS No. 82 (AU sec. 316.30) gives the following example of a specific response to the auditor’s assessment of the risk of material misstatement arising from fraudulent financial reporting of revenue.

If there is a risk of material misstatement due to fraud that may involve or result in improper revenue recognition, it may be appropriate to confirm with customers certain relevant contract terms and the absence of side agreements—inasmuch as the appropriate accounting is often influenced by such terms or agreements. For example, acceptance criteria, delivery and payment terms and

the absence of future or continuing vendor obligations, the right to return the product, guaranteed resale amounts, and cancellation or refund provisions often are relevant in such circumstances. [Footnote omitted.]

1.124 SAS No. 82 also notes that the nature, timing, and extent of audit procedures may need to be modified in response to the auditor's assessment of the risk of material misstatement due to fraud. It includes specific examples of responses that are included in the discussion of various auditing procedures throughout this section.

Transactions With Related Parties

1.125 SAS No. 45, *Related Parties* (AICPA, *Professional Standards*, vol. 1, AU sec. 334), provides guidance on procedures to obtain evidential matter on related-party relationships and transactions that must be disclosed in accordance with FASB Statement No. 57. (See the section of this chapter titled "Summary of Selected Accounting Literature on Revenue Recognition.") SAS No. 45 (AU sec. 334.02) states that "the auditor should be aware that the substance of a particular transaction could be significantly different from its form and that financial statements should recognize the substance of particular transactions rather than merely their legal form." In the absence of evidence to the contrary, transactions with related parties should not be assumed to be outside the ordinary course of business. The auditor, however, should be aware of the possibility that transactions with related parties may have been motivated by such conditions as an urgent desire for a continued favorable earnings record in the hope of supporting the price of the company's stock, or significant obsolescence dangers because the company is in a high-technology industry.

1.126 SAS No. 45 (AU sec. 334.08) describes examples of procedures for identifying material transactions with parties known to be related and for identifying material transactions that may indicate the existence of previously undetermined relationships. Among the procedures are the following.

- Review proxy and other material filed with the SEC and comparable data filed with other regulatory agencies for information about material transactions with related parties.
- Review conflict-of-interests statements obtained by the company from its management.
- Review the extent and nature of business transacted with major customers, suppliers, borrowers, and lenders for indications of previously undisclosed relationships.
- Review accounting records for large, unusual, or nonrecurring transactions or balances, paying particular attention to transactions recognized at or near the end of the reporting period.

1.127 SAS No. 45 requires the auditor to place emphasis on testing material transactions with parties he or she knows are related to the reporting entity. It states that procedures should be directed toward obtaining and evaluating sufficient competent evidential matter and should extend beyond inquiry of management. The following are among the procedures that should be considered to obtain satisfaction concerning the purpose, nature, and extent of related-party transactions and their possible effect on revenue recognition.

- Obtain an understanding of the business purpose of the transaction.
- Examine invoices, executed copies of agreements, contracts, and other pertinent documents, such as receiving reports and shipping documents.

- Determine whether the transaction has been approved by the board of directors or other appropriate officials.
- Confirm the transaction amount and terms, including guarantees and other significant data, with the other party or parties to the transaction.
- Refer to financial publications, trade journals, credit agencies, and other information sources when there is reason to believe that unfamiliar customers, suppliers, or other business enterprises with which material amounts of business have been transacted may lack substance.
- With respect to material uncollected balances, guarantees, and other obligations, obtain information about the financial capability of the other party or parties to the transaction. Such information may be obtained from audited or unaudited financial statements, tax returns, reports issued by regulatory agencies or taxing authorities, financial publications, or credit agencies.

1.128 The auditor should consider whether he or she has obtained sufficient competent evidential matter to understand the relationship of the parties and the effects of related-party transactions on the financial statements.

Analytical Procedures

1.129 SAS No. 56, *Analytical Procedures* (AICPA, *Professional Standards*, vol. 1, AU sec. 329), requires the use of analytical procedures in the planning and review phases of the audit. Analytical procedures also may be used as substantive tests, although SAS No. 56 notes that they may not be as effective or efficient as tests of details in providing the desired level of assurance for some assertions.

1.130 Analytical procedures involve the comparisons of recorded amounts, or ratios developed from the recorded amounts, to expectations developed by the auditor. The auditor's expectations may be developed from a variety of sources including the financial information for comparable prior periods, anticipated (budgetary) results, and information regarding the industry in which the client operates and its normal business practices with regard to sales and distribution. For analytical procedures to be effective, the expectation should be precise enough to provide the desired level of assurance that differences that may be potential material misstatements, individually or when aggregated with other misstatements, would be identified for the auditor to investigate.

1.131 An objective of applying analytical procedures in the planning phase of the audit is to identify areas that may represent specific risks relevant to the audit, such as the existence of unusual transactions and events, and amounts, ratios, and trends that might indicate matters that have financial statement and audit planning ramifications. The following analytical procedures are particularly useful in identifying unusual fluctuations in the revenue cycle that warrant additional consideration. Depending on the presence of risk factors and other judgments made during audit planning, the auditor may wish to perform one or more of the following procedures.

- Compare monthly and quarterly sales by location and by product line with sales of the preceding comparable periods and for comparable periods in prior years. Consider whether the results are consistent with other known information, such as expanding or declining markets, changes in sales price mix, and new or discontinued product lines. Comparison of weekly and daily sales may be appropriate for certain periods such as the last month or week of the year.

- Analyze the ratio of sales in the last month or week to total sales for the quarter or year.
- Compare revenues recorded daily for periods shortly before and after the end of the audit period for unusual fluctuations such as an increase just before and a decrease just after the end of the period.
- Compare gross profit ratio, overall and by product line, to previous years and to budget and consider in the context of industry trends.
- Compare details of units shipped with revenues and production records and consider whether revenues are reasonable compared to levels of production and average sales price.
- Compare the number of weeks of inventory in distribution channels with prior periods for unusual increases that may indicate channel stuffing.
- Compare percentages and trends of sales into the distributor channel with industry and competitors' sales trends, if known.
- Compare revenue deductions, such as discounts and returns and allowances, as a percentage of revenues with budgeted and prior period percentages for reasonableness in light of other revenue information and trends in the business and industry.
- Compare sales credits for returns subsequent to year end with monthly sales credits during the period under audit to determine whether there are unusual increases that may indicate contingent sales or special concessions to customers.
- Analyze the ratio of returns and allowances to sales.
- Compare the aging of accounts receivable in the current and prior periods for buildup of accounts receivable.
- Compare monthly cash receipts for the period under audit to cash receipts subsequent to year end to determine whether receipts subsequent to year end are unusually low compared to the collection history during the months under audit.

1.132 SAS No. 56 requires the auditor to evaluate significant unexpected differences that are identified by analytical procedures. Management responses ordinarily should be corroborated with other evidential matter. In situations in which an explanation for the difference cannot be obtained, the auditor should obtain sufficient evidence about the assertion by performing other audit procedures to determine whether the difference is a likely misstatement. This may be particularly appropriate in investigating individually significant revenue transactions.

Cutoff Tests, Vouching, and Other Substantive Tests of Details

1.133 The auditor should consider performing tests of details of transactions to determine whether transactions have been properly recorded in accordance with the company's stated accounting policies. Such tests may include cutoff tests and vouching.

Revenue Cutoff Tests

1.134 If sales transactions involve the shipment of a product, revenue cutoff tests are used to test the revenue recognition process by determining whether goods have been shipped to the customer and whether the related

revenues have been recorded in the same accounting period as shipment occurred. Revenue cutoff tests often are performed in connection with inventory cutoff tests. The scope of cutoff tests may be influenced by the following:

- Large quantities of merchandise awaiting shipment being noted during the year-end inventory observation
- Significant in-transit inventory at year end, significant change from the prior year, or both
- An unusual increase in sales in the last few days of the audit period followed by an unusual decrease in the first few days after the audit period
- Numerous shipping locations
- Products with a relatively large per unit value
- Situations in which revenue is recognized before shipment or passage of title

1.135 An example of a cutoff test is to examine invoices and shipping documents for several days before and after the end of the accounting period and to trace such documents to the receivables and revenue records for the appropriate period. Compare the date of the invoices to the date of the related shipping documents. The date of billing is not necessarily the time when the revenue should be recognized—it is merely an indication of when the goods were billed. Compare quantities invoiced to quantities shipped, and verify that shipment was made to the customer's site. To review the records properly, use the client's mechanism for establishing control over the recording of shipments and billing of goods, for example, prenumbered shipping reports and prenumbered invoices, for each shipping point.

Vouching

1.136 Vouching transactions is an effective and efficient procedure relating to *occurrence* or *accuracy* and *completeness* assertions when controls are weak. The objective is to determine whether recorded transactions actually occurred (are supported by valid source documents or records) and were accurately recorded. An example of vouching transactions is to select a sample of sales invoices from the revenue journal for a period before and a period after the balance sheet date and test for the propriety of revenue recognition with reference to the contractual terms with the customer and relevant legal and accounting regulations. Trace all information (for example, customer's name, product description, quantities, prices, terms, and shipping date) to shipping documents and approved sales order or other customer authorization. Trace prices charged to price lists or job quotations. Check extensions and foot invoices or billings for clerical accuracy. Trace invoiced amounts to the subsidiary accounts receivable ledger.

Other Substantive Tests of Details

1.137 Other tests of details might include, depending on the specific risks and environment, the following.

- Examine inventory reports or other correspondence from distributors and reconcile this information with the company's records.
- Vouch all large or unusual sales made at quarter end and year end to original source documents.
- Perform a detailed review of the entity's quarter-end or year-end adjusting entries and investigate any that appear unusual as to nature or amount.

- Scan the general ledger, accounts receivable subledger, and sales journal for unusual activity.
- Check the clerical accuracy of the revenue journal or similar record and trace the postings of the totals to the appropriate account in the general ledger.
- Check the reconciliation of revenue journals during the audit period to the general ledger control account, or check the postings to the general ledger control account from sources other than the revenue journal for unusual or unexpected activity.
- Analyze and review deferred revenue accounts at end of the period for propriety of deferral.
- Analyze and review credit memos and other accounts receivable adjustments for the period subsequent to the balance sheet date.
- Scan the general ledger or subsidiary ledgers, as appropriate, for a period subsequent to year end for reversals of sales or large sales returns.
- Review significant year-end contracts for unusual pricing, billing, delivery, return, exchange, or acceptance clauses. Perform post year-end specific review for contract revisions or cancellations and for refunds or credits issued.

Confirmations

1.138 SAS No. 67, *The Confirmation Process* (AICPA, *Professional Standards*, vol. 1, AU sec. 330), provides guidance to auditors about obtaining evidence from third parties about financial statement assertions made by management. SAS No. 31, *Evidential Matter* (AICPA, *Professional Standards*, vol. 1, AU sec. 326), states that it is generally presumed that evidential matter obtained from independent sources outside an entity provides greater assurance of reliability than that secured solely within the entity.

1.139 SAS No. 67 requires auditors who have not requested confirmations in the examination of accounts receivable to document how they overcame the presumption to do so.

1.140 SAS No. 67 (AU sec. 330.25) also states the following.

The auditor's understanding of the client's arrangements and transactions with third parties is key to determining the information to be confirmed. The auditor should obtain an understanding of the substance of such arrangements and transactions to determine the appropriate information to include on the confirmation request. The auditor should consider requesting confirmation of the terms of unusual agreements or transactions, such as bill and hold sales, in addition to the amounts. The auditor also should consider whether there may be oral modifications to agreements, such as unusual payment terms or liberal rights of return. When the auditor believes there is a moderate or high degree of risk that there may be significant oral modifications, he or she should inquire about the existence and details of any such modifications to written agreements. One method of doing so is to confirm both the terms of the agreements and whether any oral modifications exist. [Footnote omitted.]

1.141 As previously discussed, the confirmation of contract terms is suggested in SAS No. 82 in response to the auditor's assessment of the risk of material misstatements arising from fraudulent financial reporting, and in SAS No. 45 to determine the purpose, nature, and extent of transactions with related parties and their effect on the financial statements.

1.142 In addition, in some entities, the nature of the business is such that the majority of revenues are made up of complex transactions evidenced by individual contracts. Entities in which the majority of sales are made pursuant to standard terms also may enter into such contracts for amounts that may be material to recorded revenue. Auditors should consider reading the terms of contracts because they may significantly affect the accounting treatment for the transaction. In situations in which the auditor requests confirmation of contract terms, he or she should consider confirming with the customer *all* the significant contract terms, including information about payment terms, right-of-return privileges, acceptance criteria, termination arrangements, or bill and hold transactions. The auditor should consider the need to confirm with the customer whether there are significant unfulfilled vendor obligations or the existence of any oral or written agreements, particularly with regard to return or termination arrangements, that may alter the terms of the contract. In some circumstances, auditors might also consider contacting major customers orally in addition to written confirmations to determine whether the responses to confirmation requests received appropriate attention from personnel who are knowledgeable about the contract.

Evaluating Accounting Estimates Relevant to Revenue Recognition

1.143 The auditor is responsible for evaluating the reasonableness of accounting estimates made by management in the context of the financial statements taken as a whole. Evaluation of estimates is always an area of auditing concern because the measurement of estimates is inherently uncertain and depends on the outcome of future events. SAS No. 57, *Auditing Accounting Estimates* (AICPA, *Professional Standards*, vol. 1, AU sec. 342.10), states the following.

In evaluating reasonableness, the auditor should obtain an understanding of how management developed the estimate. Based on that understanding, the auditor should use one or a combination of the following approaches:

- a. Review and test the process used by management to develop the estimate.
- b. Develop an independent expectation of the estimate to corroborate the reasonableness of management's estimate.
- c. Review subsequent events or transactions occurring prior to completion of fieldwork.

1.144 Estimates that are significant to management's assertions about revenue include sales returns, the allowance for doubtful accounts, and revenues from contracts accounted for by the percentage-of-completion method of accounting.

1.145 Auditors often use historical data to evaluate the reasonableness of such estimates as reserves for sales returns. Historical data may indicate client practices to take back inventory even when no contractual right of return exists. Analysis of the aging of accounts receivables that reflects a "building up" of receivables may indicate contingent sales or concessions to customers regarding the return of goods. Auditors also should consider reviewing sales to major customers, particularly to distributors, to detect excess purchases (channel stuffing) that may be at greater risk of return in the subsequent period. A company's ability to make reasonable estimates of sales returns may

be impaired if the company does not have sufficient visibility into what is going on in the sales channel. Reliance on solely historical averages may be insufficient, especially if the environment is somewhat volatile.

1.146 Estimating reserves for sales returns is particularly difficult when a new product has been introduced for which there is no historical data. Procedures that the auditor may consider include the following.

- Read trade magazines and analysts' reports to gain an understanding of the acceptance of the product in the marketplace.
- Analyze activity subsequent to year end when actual product returns may have occurred.
- Consider the susceptibility of the product to technological change and how thoroughly tested it was prior to release.
- Analyze historical returns for similar product lines.

1.147 The ability to make reasonable estimates of future returns is one of the conditions that must be met for recognition of revenue at the time of sale in accordance with FASB Statement No. 48, *Revenue Recognition When Right of Return Exists*. (See the section of this chapter titled "Summary of Selected Accounting Literature on Revenue Recognition.") If reasonable estimates cannot be made, revenue recognition should be deferred.

1.148 In addition to analyzing historical data and the accounts receivable aging reports, auditors should consider testing the company's estimate of the collectibility of receivables by procedures such as the following.

- Obtain publicly available information on major customers to determine their ability to honor outstanding obligations to the company.
- Investigate unusual credit limits or nonstandard payment terms granted to customers.
- Test subsequent collections of receivables.

1.149 Revenue recognition for contracts accounted for by the percentage-of-completion method is dependent on estimates of contract revenues, contract costs, and the extent of progress toward completion. Meaningful measurement of the extent of progress toward completion is essential because this factor is used in determining the amounts of estimated contract revenue and estimated gross profit that will be recognized as earned in any given period. All of the factors that affect total estimated revenue, including the basic contract price, contract options, change orders, claims, and contract provisions for penalties and incentive payments, must be reevaluated throughout the life of a contract. Although costs incurred to date may be verifiable, estimated costs to complete also are subject to continual refinement as work progresses. Auditors should obtain a sufficient understanding of the contract to evaluate the reasonableness of management's assumptions regarding the estimates. Management also may rely on engineers or architects to make significant estimates. In that case, the auditor should consider SAS No. 73, *Using the Work of a Specialist* (AICPA, *Professional Standards*, vol. 1, AU sec. 336), and the need to evaluate the relationship of the specialist to the client, including circumstances that might impair the specialist's objectivity. If the auditor believes the specialist's objectivity might be impaired, the auditor should perform additional procedures with respect to some or all of the specialist's findings to determine that the findings are not unreasonable or should engage another specialist for that purpose.

Observation of Inventory

1.150 In cases in which inventory is observed at the end of a reporting period, auditors frequently obtain information pertaining to the final shipments of goods made during the period. This information later is compared to the client's sales records to determine whether a proper cutoff of sales occurred. Additional procedures include inspecting the shipping areas at the observation site and making inquiries about whether goods in the shipping area will be included in inventory. If they are not to be included in inventory, the auditor may need to obtain information about the nature of the goods and the quantities, and make additional inquiries of management. Auditors also might inspect the site to determine whether any other inventory has been segregated, and inquire of management whether the company's shipping policy is consistent with prior periods and, if not, why.

1.151 If entities have numerous shipping locations, auditors should consider observing inventory counts at all locations on the same day. Alternatively, auditors should consider observing inventory counts at certain locations on an unannounced basis, to detect whether inventories are being shipped from one entity location to another and recorded as sales.

1.152 In situations in which potential obsolescence or technology issues may pose special problems, the auditor should consider whether the staff who have been assigned to observe the inventory have the appropriate experience and training and whether the extent of supervision is appropriate for the assessed level of risk.

Management Representations

1.153 SAS No. 85, *Management Representations*, as amended by SAS No. 89, *Audit Adjustments (AICPA, Professional Standards, vol. 1, AU sec. 333)*, requires the auditor to obtain written representations from management as a part of an audit of financial statements performed in accordance with GAAS. Such representations are part of the evidential matter the independent auditor obtains, but they are not a substitute for the application of those auditing procedures necessary to afford a reasonable basis for an opinion. Written representations from management complement other auditing procedures.

1.154 SAS No. 85 provides guidance on the matters to which specific representations should relate, including the financial statements; completeness of information; recognition, measurement and disclosure; subsequent events; and audit adjustments. Examples of such representations that are relevant to revenue recognition include representations that—

- There has been no fraud that could have a material effect on the financial statements.
- Related-party transactions, including sales and amounts receivable from related parties, have been properly recorded and disclosed.
- All financial records and related data have been made available.
- Significant estimates and material concentrations that are required to be disclosed in accordance with SOP 94-6 have been disclosed.
- The effects of any uncorrected financial statement misstatements aggregated by the auditor during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements taken as a whole. (A summary of such items should be included in or attached to the letter.)

1.155 The representation letter ordinarily should be tailored to include additional appropriate representations from management relating to matters specific to the entity's business or industry. The auditor may consider it useful to obtain written representations concerning specific revenue recognition issues, such as the terms and conditions of unusual or complex sales agreements. Such representations may include confirmation that there are no contingencies that affect the obligation of customers to pay for merchandise purchased and may also include confirmation regarding the existence of side agreements.

1.156 Auditors should consider whether there is a need to obtain written representations from individuals below the executive level, such as sales personnel.

Adequacy of Disclosure

1.157 SAS No. 32, *Adequacy of Disclosure in Financial Statements* (AICPA, *Professional Standards*, vol. 1, AU sec. 431), requires the auditor to express a qualified or an adverse opinion if management omits from the financial statements, including the accompanying notes, information that is required by GAAP.

1.158 The auditor should review the financial statements to determine whether disclosures are adequate with regard to revenue recognition policies, information about major customers or significant concentrations of credit risk, related-party transactions, and the effect of significant revisions to estimates in percentage-of-completion contracts.

Evaluation of Audit Evidence

1.159 SAS No. 31 (AU sec. 326.25) states the following.

In evaluating evidential matter, the auditor considers whether specific audit objectives have been achieved. The independent auditor should be thorough in his or her search for evidential matter and unbiased in its evaluation. In designing audit procedures to obtain competent evidential matter, he or she should recognize the possibility that the financial statements may not be fairly presented in conformity with generally accepted accounting principles or a comprehensive basis of accounting other than generally accepted accounting principles. In developing his or her opinion, the auditor should consider relevant evidential matter regardless of whether it appears to corroborate or to contradict the assertions in the financial statements. To the extent the auditor remains in substantial doubt about any assertion of material significance, he or she must refrain from forming an opinion until he or she has obtained sufficient competent evidential matter to remove such substantial doubt, or the auditor must express a qualified opinion or a disclaimer of opinion. [Footnotes omitted.]

Chapter 2

Auditing Revenue Transactions in the Computer Software Industry*

Overview of the Computer Software Industry

2.01 Entities that participate in the computer software industry typically are engaged in various aspects of the design, development, customization, distribution, licensing, implementation, and support of computer software products. As discussed in more detail in this chapter, the industry is characterized by intense competition among industry players and rapid technological innovation.

2.02 Auditors of computer software vendors will need to obtain an understanding of the client's software products, services, and distribution processes, as well as the terms and conditions of sales arrangements. Such an understanding will enhance the auditor's ability to plan and perform auditing procedures for software revenue transactions. In addition, the auditor will need knowledge of generally accepted accounting principles (GAAP) applicable to software revenue recognition.

2.03 This chapter provides guidance on auditing software revenue transactions that fall within the scope of Statement of Position (SOP) 97-2, *Software Revenue Recognition*, as amended by SOP 98-9, *Modification of SOP 97-2, Software Revenue Recognition, With Respect to Certain Transactions*. It applies to all entities that earn such revenue, whether or not the entities regard themselves as software vendors. It does not apply, however, to revenue earned from the sale of products or services containing software that is incidental to the products or services as a whole.

Types of Revenue Transactions

2.04 Software vendors generally do not sell or transfer title to their products to their customers; rather, they earn revenues from licensing fees. Fees can relate to products or, as is frequently the case, the licensing of products together with related services, as discussed in the following paragraphs.

- **Products.** Some software vendors are involved in the retail licensing of "shrink-wrapped" software products to end users. Those users typically receive no maintenance or other services with the exception of telephone or Internet support, sometimes for a limited period of time. Shrink-wrapped software products frequently are marketed through distribution channels, such as distributors and resellers. Software also may be delivered electronically, with the customer taking possession of the product via download or by receiving access codes that allow immediate possession of the software on the customer's hardware.

* See chapter 1, "Overview: Audit Issues in Revenue Recognition," of this Guide for a related discussion of the matters presented in this chapter.

- *Products and services.* Many software vendors are engaged in providing more comprehensive software “solutions” to their customers. In that capacity, software vendors license their software products together with postcontract customer support (PCS); upgrades/enhancements;¹ or such services as installation, training, or consultation. Revenue transactions that involve both products and services typically are evidenced by a license agreement that describes the terms and conditions of the arrangement.

2.05 The complexity of certain software products has led software customers to demand more services from software vendors, including, for example, consulting, systems integration, and ongoing support. Accordingly, as software vendors meet these customer needs, their revenue mix will shift toward an increased percentage of service revenues. As described in paragraphs 2.17 through 2.24, the bundling of software products with additional software products, upgrades/enhancements, PCS, or other services in an arrangement with a customer creates what is referred to as a “multiple-element arrangement,” which can significantly complicate the revenue recognition process.

2.06 Barter and other nonmonetary exchanges also may occur in the industry. For example, a software vendor may accept shares of its customer’s stock as payment for its products, services, or both. Also, a software vendor may accept a customer’s products, services, or both, in exchange for its own. The auditor should carefully evaluate the transaction if consideration is other than cash or there is a back-to-back transaction. This may not be apparent if checks are exchanged.

Competitive Environment

2.07 The software industry is intensely competitive, and industry participants use a variety of pricing mechanisms and other product offerings to gain market share and increase their installed customer base. Techniques used to generate revenues may include—

- The licensing of “suites” of interrelated products.
- Upgrades/enhancements.
- Free installation, maintenance, or both.
- Fees based on the number of units distributed or the expected number of users.
- Site licensing arrangements.
- Time-based licenses.
- Software hosting arrangements.

2.08 The competition for market share among software vendors gives customers significant leverage and buying power. This buying power, together with no cost or low cost of reproducing the software, creates an incentive for software vendors to cut prices, provide liberal sales terms, or grant concessions (changes to the original terms of the arrangement), to maintain an existing or obtain a new customer relationship. Common sales terms or concessions that may affect revenue recognition in the software industry include—

¹ The terms *upgrades* and *enhancements* are used interchangeably to describe improvements to software products that are intended to extend the life or improve significantly the marketability of the original product. As described in paragraphs 2.20 and 2.24, upgrades/enhancements are accounted for differently depending on whether they are deemed to be *unspecified* or *specified*.

- Extended payment terms.
- Rights to receive future products or services free or at a substantial discount.
- Extension of the contractual license term.
- Cancellation privileges.
- Rights of return, or rights to refunds without return of the software.
- Acceptance clauses.
- Rebates.
- Issuance of equity or other equity instruments to customers.
- Accommodations to resellers and distributors, such as the following:
 - Price protection agreements.²
 - Guaranteed margin agreements.
 - Reseller stock balancing arrangements.
 - Consignment sales.
- Participation in financing arrangements for its customers.

2.09 In addition to competing for customers, software vendors also compete for technically skilled employees. Computer software is a knowledge-based product, and companies need to attract and retain highly skilled personnel to remain competitive. In many geographic areas, the demand for qualified managerial, research and development, technical, and marketing personnel exceeds availability. As a result, software vendors have been, and likely will continue to be, required to increase compensation and incentives to continue to recruit and retain the required personnel. Frequently, compensation is linked either directly or indirectly (for example, in the form of company stock or stock options) to revenue growth.

2.10 Rapid innovation and substantial technological change also characterize the industry. New industry players and products continually emerge, and software vendors are under constant pressure to enhance the capabilities and quality of their products and services. Vendors whose products become technologically inferior become vulnerable to customer demands for price or other concessions.

2.11 A software vendor's customers frequently look at their purchase of the vendor's product as part of a longer-term relationship. This is particularly true when the software provides a complex, enterprise-wide type of solution versus a shrink-wrap solution that runs on a personal computer. With the enterprise-wide solution, the customer may look to the vendor to keep its software current, for example, to operate on new platforms, or may count on the vendor to continuously add more features and functionality to the purchased software. In these situations, the customer may place significant value on the vendor's ongoing maintenance program, which could be a significant factor in the customer's decision to purchase the vendor's software instead of that of a competitor. As a result, customers that purchase enterprise-wide applications are interested in information about the features and functionality of a software vendor's next release. Depending on whether and how this information is communicated, there may be a question about whether the customer is entitled to a specified upgrade right.

² A price-protection agreement clause requires the software vendor to rebate or credit a portion of the original fee if the vendor subsequently reduces its price for a product and the reseller still has rights with respect to that product.

2.12 For publicly traded software vendors, the market price of the company's stock has important strategic implications. As previously described, software vendors frequently use company stock and stock options to compensate employees. The more valued the stock and options, the easier it will be for the company to recruit and retain needed employees. Additionally, software vendors may acquire other entities as a means to capture market share or to expand the depth and breadth of products and services. The company's common stock frequently is used to make acquisitions, so an increasing stock price will greatly enhance a company's ability to pursue these growth strategies.

2.13 Auditors should be aware that stock market valuations for software vendors are subject to significant volatility and are dependent on growth in revenues and earnings. Accordingly, the ability to record revenue in a particular reporting period can have a significant effect on a company's stock price. As described in paragraph 2.35, a motivation to achieve unduly aggressive or clearly unrealistic targets for revenue growth creates a risk factor relating to misstatements arising from fraudulent financial reporting.

2.14 The pressure to meet quarterly or annual earnings expectations creates a strong incentive for entities to complete transactions by the end of the reporting period. Even entities that are not yet public but are positioning themselves for a public offering may have an incentive to demonstrate a history of recent revenue growth. Customers can take advantage of this desire to meet revenue expectations by forcing software vendors to lower prices or provide more liberal sales terms in contracts negotiated near the end of a reporting period. For these reasons, it is common for software vendors to have a significant number of sales near the end of a reporting period. As described in paragraph 2.33, significant transactions near the end of a reporting period generally lead to an increased risk of material misstatement.

Summary of Significant Accounting Guidance Relevant to Software Revenue Recognition³

Software Revenue Recognition

2.15 SOP 97-2 provides the primary guidance on accounting for software revenue recognition.⁴ As set forth in SOP 97-2, revenue should be recognized when all of the following criteria are met.

- *Persuasive evidence of an arrangement exists.* With the exception of the packaged software sector of the industry, most software vendors rely on written contracts to document the arrangement with their customers. The contract should be fully executed by both parties. Vendors that normally do not rely on contracts should have other evidence, for example, purchase orders or online authorizations, to document transactions.

³ This discussion provides an overview of the significant accounting guidance relevant to software revenue recognition and is intended merely to provide background information for the auditing guidance that follows. Readers who wish to implement accounting standards related to software revenue recognition should refer to the applicable pronouncements. A list of accounting literature that is relevant to software revenue recognition is included in the appendix to this Guide.

⁴ In addition, AICPA staff, in conjunction with industry experts, have developed a number of AICPA Technical Practice Aids (TPAs) in a question-and-answer format on various financial accounting and reporting issues related to Statement of Position (SOP) 97-2, *Software Revenue Recognition*. See the appendix to this Guide.

- *Delivery has occurred.* With certain exceptions,⁵ delivery is considered to have occurred upon the transfer of the product master or the first copy, as applicable (with the ability to retrieve an electronic download, fewer vendors are physically shipping disks). The delivery of an element is considered not to have occurred if there are undelivered elements that are essential to the functionality of the delivered element, because the customer would not have the full use of the delivered element. After delivery, if uncertainty exists about customer acceptance of the software, license revenue should not be recognized until acceptance occurs. It is not uncommon for software vendors to include acceptance clauses in their arrangements with their customers. Additionally, Securities and Exchange Commission (SEC) Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, provides guidance on revenue recognition that applies to the financial statements of SEC registrants. As noted in SAB No. 101, with respect to tangible products, title transfer should occur to satisfy the delivery criterion. Because title to products does not transfer before delivery to the customer in a freight on board (FOB) destination shipment, revenue should not be recognized until delivery to the designated location has occurred. Unless otherwise provided by authoritative literature, the SEC staff applies this same analysis to intellectual property physically delivered on a tangible medium, such as a compact disc, as it does to the delivery of tangible property. Also, the interpretive response to Question 3 in SAB No. 101 states that “if a licensed product or technology is physically delivered to the customer, but the license term has not yet begun, revenue should not be recognized prior to inception of the license term.”
- *The software vendor’s fee is fixed or determinable.* SOP 97-2 provides detailed guidance on determining whether a software vendor’s fee is fixed or determinable. As noted in paragraph 2.08, software vendors commonly grant their customers incentives or concessions that may affect the determination of revenue recognition. Sales terms that may indicate the vendor’s fee is *not* fixed or determinable include—
 - *Extended payment terms.* Any extended payment terms in a software licensing arrangement may indicate that the fee is not fixed or determinable. Moreover, if a substantial portion of the fee is not due within one year of delivery or expiration of the license term, it is *presumed* that the vendor’s fee is not fixed or determinable. While a software vendor may not have extended payment terms, not enforcing payment terms is a form of concession.
 - *Cancellation privileges.* Fees from licenses that are cancelable by customers are neither fixed nor determinable until the cancellation privileges lapse.
- *Collectibility is probable.* The term *probable* means that collection of the fee is likely to occur.⁶ No portion of the fee meets the criterion of collectibility if the portion of the fee allocable to delivered elements is subject to forfeiture, refund, or other concessions if any of the undelivered elements are not delivered. To meet this requirement, management

⁵ For example, see Emerging Issues Task Force (EITF) Issue No. 00-3, *Application of AICPA Statement of Position 97-2, Software Revenue Recognition, to Arrangements That Include the Right to Use Software Stored on Another Entity’s Hardware*.

⁶ SOP 97-2 uses the term *probable* as that term is defined in Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 5, *Accounting for Contingencies*.

must intend not to provide refunds or concessions that are not required under the provisions of the arrangement.

2.16 Software developers, including providers of shrink-wrapped software, often distribute their products through resellers. Paragraph 30 of SOP 97-2 provides a list of factors to consider in evaluating whether the fixed or determinable fee and collectibility criteria for revenue recognition are met. In general, these factors include—

- Indications that payment from the reseller is substantially contingent on the reseller's success in distributing individual units of the product.
- Financial conditions that indicate the reseller is unable to make fixed or determinable payments until it collects cash from its customers.
- Inability to reasonably estimate future returns, as described in paragraphs 2.27 through 2.30 of this chapter.
- Price protection agreements in which the vendor is unable to reasonably estimate future price changes or if significant uncertainties exist about the vendor's ability to maintain its price.

2.17 As described in paragraph 2.05, it is becoming increasingly common for software vendors to bundle their products with additional software products, upgrades/enhancements, PCS, or other services. SOP 97-2 refers to these arrangements as "multiple-element arrangements" and includes guidance on how to allocate fees to each element of the arrangement. The portion of the fee allocated to an element should be recognized as revenue when all the revenue recognition criteria specified in SOP 97-2 have been met related to that element.

2.18 SOP 97-2 requires the use of vendor-specific objective evidence (VSOE) of fair value when allocating the fee to various elements in a multiple-element arrangement. Paragraph 10 of SOP 97-2 limits VSOE of fair value to—

- The price charged when the same element is sold separately.
- If the element is not yet being sold separately, the price for each element established by management having the relevant authority; it must be probable that the price, once established, will not change before the separate introduction of the element into the marketplace.

When sufficient VSOE does not exist, all revenue from the arrangement is deferred until the earlier of the point at which (a) such VSOE does exist,⁷ or (b) all elements of the arrangement have been delivered. Certain exceptions to this rule are discussed in paragraph 12 of SOP 97-2. In addition, SOP 98-9 modified SOP 97-2 to require the use of the "residual method" in situations where VSOE exists for *all* undelivered elements but does not exist for one or more of the delivered elements. Under the residual method, the undiscounted VSOE of fair value of the undelivered elements is deferred, and the difference (residual) between the total fee and the amount deferred for the undelivered elements is recognized as revenue related to the delivered elements.

2.19 As noted in paragraph 2.05, many software vendors derive an increasing percentage of their revenues from providing services. SOP 97-2 provides separate accounting guidance for PCS services and services other than PCS-related services.

⁷ See AICPA TPA 5100.38, "Subsequent Event Related to Vendor-Specific Objective Evidence for Software Revenue Recognition."

2.20 PCS includes those activities undertaken after the product has been released to correct errors⁸ or keep the product updated with current information. Typical PCS arrangements include telephone support and unspecified product upgrades/enhancements developed by the vendor during the period in which the PCS is provided. In some instances, a software vendor may have an implied PCS arrangement with its customers, even in the absence of a written contract acknowledging the PCS arrangement. For example, an implied PCS arrangement may occur when the vendor has a historical pattern of regularly providing all customers or certain kinds of customers with the services or unspecified product upgrades/enhancements normally associated with PCS, or if the vendor provides free upgrades/enhancements through a Web site.

2.21 The fair value of PCS in a multiple-element arrangement normally is determined by reference to the price the customer would pay for PCS when it is sold separately, that is, the renewal rate.⁹ Because PCS services are presumed to be provided ratably, the portion of the fee allocated to PCS generally should be recognized ratably over the contractual or expected period of service.

2.22 Service elements other than PCS-related services include training, installation, or consulting. Consulting services often include implementation support, software design or development, or the customization or modification of the licensed software. SOP 97-2 states that separate accounting for a service element of an arrangement to deliver software and services applies only if sufficient VSOE exists to permit allocation of the revenue to the various elements of the arrangement, and both of the following criteria are met.

- The services are not essential to the functionality of any other element of the transaction.
- The services are described in the contract such that the total price of the arrangement would be expected to vary as the result of inclusion or exclusion of the services.

2.23 If the service elements other than PCS-related services meet the criteria for separate accounting, revenue allocated to the service elements should be recognized as the services are performed. If the nature of the services is such that the service elements other than PCS-related services do *not* qualify for separate accounting as a service, the software vendor would be required to account for both the software and service elements of the arrangement using long-term contract accounting as described in Accounting Research Bulletin (ARB) No. 45, *Long-Term Construction-Type Contracts*, and SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*. Contract accounting also is required whenever an arrangement between a software vendor and its customer requires significant production, modification, or customization of software.

2.24 As noted in paragraph 2.20, the PCS element of an arrangement may include the right to receive *unspecified* upgrades or enhancements on a when-and-if-available basis. A multiple-element arrangement also may include a contractual or implied upgrade right for a *specified* upgrade/enhancement. Once an upgrade right is specified, it must be treated as a separate element even if the customer is entitled to receive it under PCS. Because the software vendor may not sell the upgrade separately, the vendor may not have VSOE

⁸ See AICPA TPA 5100.43, "Corrections of Errors in Computer Software (Bug Fixes)."

⁹ See AICPA TPA 5100.44, "Postcontract Customer Support During the Deployment Phase of Computer Software."

of fair value for the upgrade. Thus, the entire sale might be deferred until the upgrade is delivered. This is very typical when a software company announces a product release before a period end but the software is not generally available until after the reporting period.

Barter and Other Nonmonetary Transactions

2.25 As noted in paragraph 2.06, software vendors sometimes enter into barter transactions or nonmonetary exchanges.¹⁰ Accounting Principles Board (APB) Opinion No. 29, *Accounting for Nonmonetary Transactions*, provides guidance on the accounting for nonmonetary exchanges. Generally, a nonmonetary transaction that is the culmination of the earnings process results in the recognition of gain or loss, measured based on the fair value of the assets involved to the extent that the fair value can be reasonably determined. A transaction that is not a culmination of the earnings process is based on the recorded amount of the asset relinquished.

Accounting for Price Protection Agreements

2.26 A price protection clause requires the software manufacturer to rebate or credit a portion of the sales price if the manufacturer subsequently reduces its price for a product and the distributors and resellers are entitled to the benefits of the price concession for past sales or for software in inventory. A software manufacturer should provide appropriate allowances for such price concessions at the date the price concessions are authorized.

Sales Returns

2.27 It is common for software vendors to provide their customers with rights of return. Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 48, *Revenue Recognition When Right of Return Exists*, specifies how an entity should account for sales of its products in which the buyer has a right to return the product. Paragraph 6 of FASB Statement No. 48 provides a list of conditions, all of which must be met to recognize revenue from the transaction at the time of sale. One of these conditions is that the amount of future returns can be reasonably estimated.

2.28 Paragraph 8 of FASB Statement No. 48 lists factors that may impair the ability to make a reasonable estimate of product returns and concludes by stating that “other factors may preclude a reasonable estimate” of product returns. In the interpretive response to Question 9 of SAB No. 101, SEC staff list the following factors that may preclude an SEC registrant from making reasonable and reliable estimates of product returns.

- Significant increases in or excess levels of inventory in a distribution channel (sometimes referred to as “channel stuffing”)
- Lack of “visibility” into or the inability to determine or observe the levels of inventory in a distribution channel and the current level of sales to end users
- Expected introductions of new products that may result in the technological obsolescence of and larger than expected returns of current products

¹⁰ See AICPA TPAs 5100.46, “Nonmonetary Exchanges of Software (Part I),” and 5100.47, “Nonmonetary Exchanges of Software (Part II).”

- The significance of a particular distributor to the registrant's (or a reporting segment's) business, sales, and marketing
- The newness of a product
- The introduction of competitors' products with superior technology or greater expected market acceptance, and other factors that affect market demand and changing trends in that demand for the registrant's products

2.29 In considering the application of FASB Statement No. 48 to a new company or a company entering a new line of business, the SEC staff believes the focus should be on the substantive factors that may affect the registrant's ability to make reasonable estimates of product returns. For example, companies may adopt new business models that involve significant changes to the way similar products have traditionally been supplied, such as the use of new distribution channels, the elimination of distributors or resellers, or the supply of a broader selection of products. Such factors may impair a company's ability to make a reasonable estimate of returns.

2.30 In circumstances where a registrant concludes that it cannot reasonably estimate the actual return rate due to a product's limited history, the SEC staff also believes that deferring revenue based on an estimate of the maximum possible returns, and recognizing revenue for the portion of the sales that exceeds the maximum estimated return rate, is inconsistent with FASB Statement No. 48.¹¹

Audit Planning

2.31 Statement on Auditing Standards (SAS) No. 22, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 311), requires auditors to gain an understanding of their client's business and the industry in which it operates. This understanding should be obtained during the planning phase of the audit, and the level of knowledge should be sufficient to enable the auditor to understand the events, transactions, and practices that may have a significant effect on the financial statements. For software revenue transactions, the auditor should consider obtaining information relating to—

- The type of software being developed and marketed.
- The software vendor's development schedule, which includes details of features and functionality and estimated release dates.
- The vendor's marketing strategy for its products.
- The nature of the customer base, for example, whether it includes resellers, end users, or both.
- The types of arrangements the company typically enters into with its customers.
- The nature and extent of any services provided in arrangements and the related effect on the recognition of revenue including, for example, whether contract accounting should be used.
- The competitive environment.
- How the software vendor's customer uses the software.
- The nature of services provided and their impact on the recognition of the software license revenue.

¹¹ See Question 27 in Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements—Frequently Asked Questions and Answers*.

2.32 Software sales transactions may involve complex revenue recognition issues and may require the assignment of more experienced auditors to perform the substantive audit procedures applied to revenue recognition and more extensive supervision. Generally accepted auditing standards (GAAS) requires that audit team members be assigned to tasks and supervised commensurate with their level of knowledge, skill, and ability so that they can evaluate the audit evidence they are examining.

Inherent Risk Considerations

2.33 Circumstances might lead the auditor to assess as high the inherent risk of misstatement of assertions about computer software revenue recognition. They include—

- **Multiple-element arrangements.** As described in paragraphs 2.17 and 2.18, when a software vendor bundles a software product with services, additional software products, upgrades/enhancements, or PCS, the fee from the arrangement must be allocated to the individual elements. In addition, the accounting for multiple-element arrangements may involve significant subjective estimates or other complexities, including—
 - Determining whether product and service, or contract, accounting applies.
 - Determining whether the undelivered elements are essential to the functionality of any of the delivered elements.¹²
- **The potential for side agreements.** The vendor and its customers may enter into side arrangements that are either undocumented or documented in agreements separate from the main contract. The potential for side agreements is greater for complex or material transactions or when complex relationships exist between the vendor and its customers. When side agreements exist, there is a greater risk that accounting personnel will be unaware of such agreements or will fail to understand all of the terms of the transaction, which may result in improper revenue recognition. Moreover, executing the side agreement after period end may indicate that evidence of the arrangement was not finalized and, thus, did not exist at the balance sheet date.
- **Transactions with significant price or other incentives, or concessions.** As described in paragraph 2.08, price and other incentives, or concessions, may affect revenue recognition. When incentives or concessions exist, there is a risk that accounting personnel will fail to properly recognize the effect they have on revenue recognition.
- **Transactions near the end of the reporting period.** As described in paragraph 2.14, it is common for software vendors to have significant amounts of transactions near the end of the reporting period. These transactions may be characterized by significant sales incentives and other conditions that affect revenue recognition. There also is an increased risk that all documents necessary to document evidence of an arrangement between the parties have not been executed fully or that they may be subsequently amended.

¹² In some circumstances, the auditor may decide that such matters require special skill or knowledge. Statement on Auditing Standards (SAS) No. 22, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 311), and SAS No. 73, *Using the Work of a Specialist* (AICPA, *Professional Standards*, vol. 1, AU sec. 336), provide guidance to the auditor who uses the work of a specialist.

- *Transactions related to new or evolving technologies.* Customers that license software products related to new or evolving technologies may demand more liberalized rights to return the product, extended periods to accept the product, or other terms. These terms, whether stated or implied, may affect revenue recognition.
- *International transactions with customers in higher risk economies.* Transactions with customers in high-risk economies have an increased risk that the fee may not be collectible. Probable collection is one of the criteria for revenue recognition. In assessing the relative risk of the economies in which the software vendor's customers operate, auditors should consider several conditions, including—
 - The health of the economy.
 - The political stability of the country.
 - The strength of the country's currency.
- *Barter transactions and other nonmonetary exchanges.* Transactions that do not involve an exchange of monetary consideration have an increased risk of not being captured by the accounting system or of not being accounted for in conformity with GAAP.
- *Back-to-back transactions.* Arrangements that may be entered into within a short time frame of one another may be part of a single negotiated arrangement that should be accounted for as such.

Consideration of Fraud

Fraud Risk Factors

2.34 Among its provisions, SAS No. 82, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 316), provides categories of fraud risk factors that the auditor should consider in assessing the risk of material misstatement due to fraud. Some of these risk factors and conditions will be present in entities where the specific circumstances do not present a risk of material misstatement. Also, specific controls may exist that mitigate the risk of material misstatement due to fraud, even though risk factors or conditions are present. When identifying risk factors and other conditions, auditors should assess whether those risk factors and conditions, individually and in combination, present a risk of material misstatement of the financial statements.

2.35 Risk factors that may indicate material misstatement of revenue arising from fraudulent financial reporting in a software vendor may be grouped in the following three categories:

- a. *Management's characteristics and influence over the control environment.* Examples include—
 - Motivations for management to engage in fraudulent financial reporting. Specific indicators might include—
 - Significant amounts of executive compensation tied to stock performance.
 - The use of unusually aggressive accounting practices to maintain or increase stock price or earnings.
 - Committing unduly aggressive or unrealistic forecasts to analysts, creditors, and other third parties.

- A failure by management to display and communicate an appropriate attitude regarding internal control and financial reporting. Specific indicators might include—
 - Lack of control over contract documentation and insufficient review and understanding of the sales agreements by finance personnel.
 - The existence of side agreements.
 - Lack of communication throughout the organization regarding acceptable revenue recognition practices.
 - Poor or no coordination between sales, accounting, and legal personnel regarding the terms of license agreements that affect revenue recognition.
 - Management or other individuals responsible for revenue recognition lack sufficient accounting expertise.
 - Excessive involvement of nonfinancial management, such as sales personnel in financial reporting.
 - Strained relations between management and the current or predecessor auditor. Specific indicators might include—
 - Unreasonable pressure on the independent auditors for a quick sign-off on the audit.
 - Resistance on the part of management to allow open communication of the auditor with the software vendor's personnel outside of the accounting function.
 - Frequent disagreements with the current or predecessor auditor on accounting, auditing, or reporting matters.
- b. *Industry conditions.* Examples include—
- A highly competitive environment accompanied by declining margins.
 - High vulnerability to technological changes and product obsolescence.
- c. *Operating characteristics and financial stability.* Examples include—
- Significant, unusual, or highly complex transactions, especially near the end of the reporting period.
 - Unusual transactions or volume of transactions with key resellers
 - A significant number or value of contracts with unusual terms, for example, extended warranties, discounts, future discounts, rebates, return rights, or extended payment terms
 - The existence of an unusual number of contract amendments, late changes, or both
 - Material or unusual barter transactions
 - Back-to-back or round-trip relationships, with or without cash exchanged
 - Transactions in which the company commits to buy material amounts of products or services from a customer with similar payment and contract terms
 - Contracts entered into with the same customer within a relatively short period of time of the original contract signing

- Significant contracts with related parties.
- Significant volumes of product sold into a distribution channel without a corresponding increase in end-user demand.
- Continuing sales or provision of services to customers coupled with a lack of enforcement of payment terms on previously outstanding balances.
- Late payments or a lack of payment on contracts that include undelivered elements.
- Frequent changes in marketing or distribution methods and strategies.

Responses to the Presence of Fraud Risk Factors

2.36 SAS No. 82 provides guidance on an auditor's consideration of and response to the presence of fraud risk factors. If there is a risk of material misstatement due to fraud that may result from improper revenue recognition, the auditor should consider audit procedures addressing revenue recognition that will limit audit risk to an appropriate level in light of the risk factors present. For example, the auditor may decide to alter the nature, timing, or extent of substantive procedures. Examples of specific responses might be to perform substantive analytical procedures at a detailed level by comparing sales by product or service to auditor-developed expectations. The auditor also might conduct interviews of personnel about the risk of material misstatement of revenue due to fraud to obtain their insights about the risk and whether or how controls address the risk. SAS No. 82 (AU sec. 316.30) states that it may be appropriate to confirm with customers certain relevant contract terms, including acceptance criteria, delivery and payment terms, the absence of future or continuing vendor obligations, the right to return the product, guaranteed resale amounts, cancellation or refund provisions, and the absence of side agreements. Guidance on the use of confirmations to gather audit evidence about revenue recognition is contained in paragraphs 2.60 through 2.62 of this chapter.

Control Considerations—Obtaining an Understanding of Internal Control

2.37 SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit*, as amended by SAS No. 78 and SAS No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319), requires the auditor to obtain an understanding of internal control, including the extent to which information technology (IT) is used in significant accounting applications,¹³ that will enable the auditor to do all of the following.

- Identify the types of potential misstatements.
- Consider factors that affect the risk that misstatements would be material to the financial statements.
- Design tests of controls, when applicable.
- Design substantive tests.

¹³ SAS No. 22 (AU sec. 311.09) states: "The extent to which computer processing is used in significant accounting applications, as well as the complexity of that processing, may also influence the nature, timing, and extent of audit procedures." [Footnote omitted.]

2.38 Many revenue transactions in the software industry are characterized by unique, negotiated arrangements between the software vendor and its customers that culminate in the delivery of products and services. In obtaining an understanding of internal control over these transactions, the auditor would consider controls at each stage in this process, which generally consist of the following.

- *Deal negotiation.* Sales personnel negotiate the terms of the arrangement with the customer. Among other items, these terms specify the nature of the products and services that will be provided by the vendor, the price, and the customer's payment requirements, acceptance terms, and rights of return.
- *Contract development.* The negotiated arrangement is documented in a contract between the software vendor and its customer.
- *Credit evaluation.* The software vendor evaluates the payment terms of the arrangement and the customer's creditworthiness.
- *Deal approval.* The software vendor and its customer review the contract and all other pertinent documentation and approve the arrangement by executing the contract. The contract should be approved by the vendor's accounting and legal departments in addition to sales personnel.
- *Delivery of products and services.* The vendor delivers the products and services stipulated in the contract.

2.39 At each step in the process, controls may be designed according to objectives based on the five components of internal control described in SAS No. 55, as amended. The components of internal control are the control environment, risk assessment, control activities, information and communication, and monitoring. Paragraphs 2.40 through 2.44 of this chapter describe examples of controls over revenue recognition that may be in place in each of these components.

Control Environment

2.40 The control environment sets the tone of an organization, influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure. Characteristics of a software vendor's control environment that may improve the effectiveness of controls and decrease control risk may include—

- The adherence to a written code of conduct that expressly prohibits the departure from stated policies affecting revenue recognition. For example, the code of conduct should prohibit salespeople from making undocumented side agreements with customers or otherwise modifying standard contracts without proper approval.
- An audit committee that is knowledgeable about revenue recognition accounting matters and related controls and that can effectively carry out its responsibilities.
- The extent to which the vendor's accounting personnel or internal auditors communicate directly with the vendor's customers.

Risk Assessment

2.41 An entity's risk assessment for financial reporting purposes is its identification, analysis, and management of risks relevant to the preparation

of the financial statements. Characteristics of a software vendor's risk assessment process that may improve the effectiveness of controls and decrease control risk include managing risks associated with the improper application of GAAP related to software revenue recognition. For example, the entity should take steps to train accounting personnel properly in the application of SOP 97-2 and other authoritative pronouncements relating to software revenue recognition. Furthermore, the entity should also consider adopting standard contract terms and provisions and take steps to ensure that all additions or modifications to those terms and conditions are reviewed and evaluated by accounting personnel for the effect of the additions or modifications on revenue recognition under SOP 97-2.

Control Activities

2.42 Control activities are the policies and procedures that help ensure that management directives are carried out. Control activities should exist at all stages of the revenue transaction process described in paragraph 2.38. Control activities that may improve the effectiveness of internal control and decrease control risk include the following:

- Written standard prices and terms, along with guidelines for allowable discounts, payment terms, and other terms
- Written policies requiring appropriate management and legal approval of nonstandard terms in the arrangement relating to fees, unique provisions or concessions, and unusual discounts or rebates
- The early and continued involvement of accounting personnel or others with a detailed understanding of GAAP for software revenue recognition¹⁴ in the deal negotiation stage
- Written policies that prohibit unauthorized side agreements between the sales people (or other company employees) and the customer
- A written policy requiring a contract signed by both parties to document the terms of the arrangement
- Standardized licensing contracts
- Proper physical control of all contracts, including any amendments
- Procedures, whether manual or automated, to monitor the agreement to and compliance with terms of contracts
- Written policies describing the customer credit approval process and the periodic evaluation of existing customers' credit and payment history
- Separation of sales and credit functions
- Timely approval of customer creditworthiness
- Management review and approval of revenue recognition, including the allocation of the fee to individual elements in a multiple-element arrangement
- Timely review of contracts and all related transaction documentation by accounting personnel
- Written policies that describe shipping guidelines and, if applicable, the electronic transfer of software products

¹⁴ Some software vendors with complex licensing arrangements have created a revenue recognition committee to provide feedback to sales people during the contract negotiations and to review the resulting contracts thoroughly to ascertain that the contract is accounted for properly. The revenue recognition committee includes the participation of the principal financial officer, principal accounting officer, and the revenue recognition manager.

- Comparison of shipping or other delivery documentation to the contract
- Verification of timely and complete delivery in proper accounting period before revenue recognition
- A written policy requiring a signed service contract before revenue recognition for services
- Prompt management action concerning noncompliance with company policies with regard to contract approval and revenue recognition

Information and Communication

2.43 The information system relevant to the financial reporting objectives of revenue recognition includes the accounting system and consists of the procedures, whether automated or manual, and records established to initiate, record, process, and report revenue transactions. Communication involves providing an understanding of individual roles and responsibilities pertaining to internal control over revenue recognition. Characteristics of a software vendor's information and communication systems that may improve the effectiveness of controls and decrease control risk include the following:

- Accounting systems that maintain a history of pricing terms, refunds, and collection history
- Accounting systems that quantify the value of concessions whether they relate to refunds, free services, or additional products, for example
- Accounting and operating systems that will help develop pricing policies and track price trends
- Accounting systems that properly evaluate and maintain the initial deferral and subsequent recognition of revenue
- Accounting systems that track and maintain historical data on input measures, such as labor hours for measuring progress to completion under the percentage-of-completion method of contract accounting
- Adequate coordination and communication between sales, legal, and accounting functions regarding the terms of the arrangement between the company and its customer, especially those terms that affect revenue recognition

Monitoring

2.44 Management monitors controls to consider whether they are operating as intended and that they are modified as appropriate for changes in conditions. Characteristics of a software vendor's monitoring process that may improve the effectiveness of internal control and decrease control risk include the following:

- Management oversight of customer credit and payment issues
- Monitoring of compliance with written policies regarding contract documentation
- Monitoring days' sales outstanding (DSO) and other internal metrics
- Monitoring progress to completion

Control Considerations—Assessing Control Risk

2.45 After obtaining an understanding of internal control, the auditor should assess control risk for the assertions related to revenue recognition.

- The auditor may assess control risk at the maximum level, that is, the greatest probability a material misstatement related to revenue recognition will not be prevented or detected on a timely basis by the entity's internal controls. An auditor will assess control risk at the maximum level because he or she believes either: (a) policies and procedures are unlikely to pertain to revenue recognition misstatements or are unlikely to be effective, or (b) evaluating the effectiveness of internal control policies and procedures would be inefficient.
- The auditor may obtain evidential matter about the effectiveness of both the design and operation of a policy or procedure that supports a lower assessed level of control risk. Such evidential matter may be obtained from tests of controls planned and performed in accordance with SAS No. 55, as amended, or from procedures that were not specifically planned as tests of controls but that nevertheless provide evidential matter about the effectiveness of the design and operation of the controls. Additional guidance on performing tests of controls is also provided in the AICPA Audit Guide *Consideration of Internal Control in a Financial Statement Audit*.

2.46 The auditor's determination of whether to obtain evidential matter to support a lower assessed level of control risk, or to assess control risk at the maximum level, for assertions related to software revenue recognition often is influenced by—

- *The entity's use of IT.* In entities where a significant amount of information is initiated, recorded, processed, or reported electronically, the auditor may determine that it is not practical or possible to restrict detection risk to an acceptable level by performing only substantive tests for one or more financial statement assertions. In such circumstances, the auditor should perform tests of controls to gather evidential matter to use in assessing control risk.¹⁵
- *Nonroutine or complex transactions.* Software revenue arrangements are negotiated between the vendor and the customer, and this negotiation process may result in unique, nonroutine transactions. For revenue recognition related to nonroutine transactions or complex applications of GAAP, the auditor typically assesses control risk at the maximum level.
- *Unsophisticated internal controls.* Smaller computer software vendors may be characterized by unsophisticated organizational structures that lack certain pervasive controls, for example, segregation of duties. A lack of controls over revenue transactions would require the auditor to assess control risk at the maximum level and perform substantive audit procedures.

2.47 In circumstances where a software vendor sells primarily shrink-wrapped software under standard license terms with no installation or services, the auditor may decide to perform tests of controls over revenue recognition to obtain evidential matter to support an assessment of control risk below the maximum. Examples of tests of controls that an auditor might consider are—

- Determining that established policies for revenue recognition are in accordance with GAAP and are communicated and understood throughout the entity.

¹⁵ SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit*, as amended by SAS No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319.66–68).

- Testing whether the vendor complied with policies and procedures for recognizing revenue. For example, the auditor might test to determine that—
 - Orders were not entered without a purchase order or online authorization.
 - Credit was extended in accordance with the vendor's predetermined limits.
 - Sales were not recorded until shipment occurred.
 - Revenue was not recognized before commencement of the license term.
 - Payment was enforced in accordance with the vendor's standard terms.
- Test controls over accumulating information necessary for financial statement preparation, including the vendor's development of estimated sales returns.

Designing Analytical Procedures

2.48 SAS No. 56, *Analytical Procedures* (AICPA, *Professional Standards*, vol. 1, AU sec. 329), requires auditors to use analytical procedures to some extent in the planning and review stages of all audits. In addition, it states that in some cases, analytical procedures may be more effective or efficient than tests of details to achieve particular substantive testing objectives. The purpose of analytical procedures in the planning stage of the audit of a software vendor is to assist the auditor in planning the nature, timing, and extent of the auditing procedures that will be used to obtain evidence to support software revenue recognized during the period. The following analytical procedures may be used for planning purposes and also, in some circumstances, as substantive tests.

- Review DSO, and trend of DSO, over the last several quarters for both software and services, as applicable.
- Segregate and analyze DSO by geography, industry, and salesperson, as appropriate, based on identified or perceived risk (for example, economic conditions in certain countries or industries, and key salespeople identified as being aggressive).
- Compare the number of weeks of inventory in distribution channels with prior periods for unusual increases that may indicate channel stuffing.
- Compare aging of accounts receivable in the current and prior periods.
- Perform a historical comparison of the revenue attributable to each of the various services as a percentage of the whole.
- Compare current and historic sales (in dollars and in units) to identify unusual trends.
- Consider fluctuations (or the absence of fluctuations) in recorded revenues in light of industry conditions, product life cycles, new product introductions, and competitive conditions.
- Review internally used metrics or nonfinancial indicators of sales activity.
- Review margins on services other than PCS-related services to evaluate whether the delivered software requires substantial services once delivered.

Designing Substantive Procedures Based on Risk Assessment

2.49 Auditors should design substantive procedures that will address the assertions made about software revenue recognition—occurrence, completeness, rights, valuation, and presentation and disclosure. The objectives of the audit procedures should be developed in light of these assertions and the specific risks of material misstatement particular to software revenue recognition.

2.50 The risks of misstatement unique to software revenue recognition primarily relate to the improper application of the accounting guidance contained in SOP 97-2, and intentional misstatements of earnings. Therefore, auditors who perform substantive procedures related to software revenue recognition should be knowledgeable in the application of SOP 97-2 and all related guidance.

Types of Potential Misstatement

2.51 The types of potential misstatements related to software revenue recognition and the improper application of SOP 97-2 include the following.

<u>Potential Misstatement</u>	<u>Example</u>	<u>SOP 97-2¹⁶</u>
a. <i>Arrangement does not exist.</i>	● Both parties did not execute a final contract during the reporting period.	¶16
	● There is no purchase order or online authorization.	¶16
b. <i>Software was not delivered during the reporting period.</i>	● Uncertainty exists about customer acceptance.	¶20
	● Product master has not been transferred to the customer.	¶18
	● Undelivered elements are essential to the functionality of the delivered elements.	¶13
	● Shipping documents indicate software was not delivered during the reporting period.	¶18
	● Vendor has delivered software but has also agreed to deliver <i>unspecified</i> additional software products in the future such that the arrangement is in substance a subscription.	¶49

(continued)

¹⁶ Unless otherwise noted.

<u>Potential Misstatement</u>	<u>Example</u>	<u>SOP 97-2¹⁶</u>
c. <i>Fee is not fixed or determinable.</i>	<ul style="list-style-type: none"> ● License term has not yet begun. ● Arrangement allows for extended payment terms. ● Fee is based on number of units distributed or copied or expected number of users of the product. ● Vendor has participated in financing arrangements for the customer. ● Reseller issues. ● Vendor has granted concessions in the past. 	SAB 101 ¶28 ¶26 ¶27 ¶30 ¶14
d. <i>Collectibility is not probable.</i>	<ul style="list-style-type: none"> ● Customer's lack of creditworthiness calls into question its ability to make contractual payments. ● Fee is subject to forfeiture, refund, or other concession if any undelivered elements are not delivered. 	¶8 ¶14
e. <i>Fee is not properly allocated to individual elements.</i>	<ul style="list-style-type: none"> ● Software vendor fails to identify all the elements in a multiple-element arrangement. ● Vendor-specific objective evidence of fair value is not properly determined or is not available for all undelivered elements. ● Elements are essential to each other's functionality. ● The contract requires significant modification or customization, making contract accounting applicable. 	¶9 ¶10 ¶13 ¶7
f. <i>Discounts and rights of return or refund have not been accounted for properly.</i>	<ul style="list-style-type: none"> ● Discounts are improperly allocated to individual elements in a multiple-element arrangement. ● Improper application of FASB Statement No. 48 has been made regarding sales returns and refunds. 	¶11 ¶26

(continued)

<u>Potential Misstatement</u>	<u>Example</u>	<u>SOP 97-2¹⁶</u>
g. <i>Fees relating to PCS services are recognized improperly.</i>	<ul style="list-style-type: none"> ● Software vendor fails to allocate a portion of the fee to implied PCS arrangements. ● Revenue from PCS arrangements is incorrectly recognized on delivery of software when specified criteria have not been met. ● Fee accounted for as PCS includes a specified upgrade. 	<p style="text-align: center;">¶56</p> <p style="text-align: center;">¶59</p> <p style="text-align: center;">¶36, 56</p>
h. <i>Fees relating to arrangements that include services other than PCS-related services are recognized improperly.</i>	<ul style="list-style-type: none"> ● Fees relating to a product in an arrangement including services other than PCS-related services are improperly recognized upon delivery of product when services do not meet the criteria for separate accounting or when contract accounting is required. ● Functionality depends on undelivered elements. 	<p style="text-align: center;">¶65</p> <p style="text-align: center;">¶65</p>
i. <i>Revenue is improperly deferred.</i>	<ul style="list-style-type: none"> ● Revenue deferred due to a lack of VSOE is not recognized when VSOE exists or all the elements in the arrangement have been delivered, or is recognized before establishment of VSOE or delivery of all elements. ● Software vendor lacks evidence to support the performance of services. 	<p style="text-align: center;">¶12</p> <p style="text-align: center;">¶66</p>

2.52 There is not necessarily a one-to-one correspondence between substantive procedures and audit objectives—some procedures accomplish more than one objective and address several potential risks of misstatement. To reduce the risk of material misstatement of revenue from software transactions, auditors should consider the substantive procedures described in paragraphs 2.53 through 2.73.

Read and Analyze Contracts

2.53 Typically, software vendors should document the terms of their arrangements with their customers in a licensing agreement or other legal contract. Reading and analyzing the terms of these contracts will allow auditors to determine whether the fees associated with the transaction were recognized in accordance with GAAP.

2.54 In determining which contracts to read and analyze, the auditor should select a sufficient number and type of contracts to reduce audit risk to an acceptable level. In determining which contracts to select for analysis, the auditor should consider the following.

- a. *The materiality of the transaction.* An auditor may be able to reduce audit risk to an acceptable level by analyzing all material contracts entered into during the audit period together with a selection of other contracts that, individually, were not considered material.
- b. *The date the contract was entered into.* It is common for software vendors to enter into licensing arrangements with their customers close to the end of the reporting period. To reduce the risk of revenues being recorded in the wrong period, auditors should consider focusing audit attention on transactions near the end of the reporting period. Also, contracts signed in close proximity with the same customer may be part of a single arrangement.
- c. *Contracts relating to transactions with a high inherent risk.* Paragraph 2.33 describes revenue transactions that typically have a higher inherent risk of material misstatement. When selecting contracts for detailed analysis, auditors should consider focusing audit attention on such transactions. For example, a careful review of the contract can help the auditor develop an understanding of the scope and nature of services to be performed. Indications of the importance of the services to the overall arrangement often can be viewed through the conditions of acceptance and payment terms. Should there be acceptance tests and milestone payments, there is a higher likelihood that the services are essential to the functionality of the software.

2.55 Some software vendors use standardized agreements for all revenue transactions or for certain specified transactions. When the software vendor uses standardized agreements, audit procedures may be limited to—

- Evaluating the standardized contract for terms that may affect revenue recognition, and
- Reviewing a sample of contracts for compliance with the standardized agreement and appropriate allocation of the fee to individual elements in a multiple-element arrangement.

2.56 As described in paragraph 2.15 of this chapter, SOP 97-2 requires persuasive evidence of an arrangement between the software vendor and its customer before revenue is permitted to be recognized. When the software vendor uses written contracts to document its arrangements with its customers, the contract must be fully executed by both parties before revenue on the contract may be recognized. Vendors that normally do not rely on contracts should have other evidence, for example, purchase orders or online authorizations, to document transactions. Oral agreement to the terms of the contract does not constitute full execution.

2.57 When the auditor believes there is significant risk that revenue may be recorded before the existence of an agreement, he or she should consider reviewing or obtaining copies of contracts or other evidence of arrangements executed near the end of the audit period.

2.58 When analyzing a contract, the auditor should consider—

- Whether the contract was fully executed by both parties during the audit period.

- Whether the client has identified all the products and services (the elements) in a multiple-element arrangement. To identify and understand all the elements of a contract, the auditor may need to use the work of a specialist. SAS No. 73, (AICPA, *Professional Standards*, vol. 1, AU sec. 336), *Using the Work of a Specialist*, provides guidance on the use of the work of specialists as evidential matter.
- Whether products and services or contract accounting is appropriate, if a multiple-element arrangement includes services.
- The fees provided for under the contract and payment provisions.
- The existence of provisions that affect whether the fee is fixed or determinable, such as price protection, returns, and cancellations.
- The obligations of both parties under the contract.
- The specified delivery dates and methods.
- Whether the contract is part of another arrangement.
- All other provisions that could affect revenue recognition.

2.59 Software vendors may enter into oral or written “side agreements” to contracts that effectively modify those contracts. Auditors should make inquiries of those familiar with the terms of the arrangement (for example, sales personnel) to determine whether side agreements exist and to ensure that all terms of the agreement between the software vendor and its customer have been considered when determining revenue recognition.

Confirm Terms of the Arrangement

2.60 SAS No. 67, *The Confirmation Process* (AICPA, *Professional Standards*, vol. 1, AU sec. 330), provides guidance on the use of confirmations to gather evidential matter. When the combined level of inherent risk and control risk is high, SAS No. 67 states that the auditor should consider confirming the terms of complex transactions with other parties in addition to examining documentation held by the entity. Complexity combined with high levels of inherent and control risk frequently characterize software revenue transactions.

2.61 The auditor’s understanding of the client’s arrangements and transactions with its customers is key to determining the information to be confirmed. By reading the contract and understanding the terms of the arrangements, the auditor should determine the appropriate information to include on the confirmation request. When confirmations are used to gather evidential matter relating to software revenue recognition, the auditor should consider confirming the following terms:

- Date(s) of delivery
- Date of customer acceptance
- Date of installation
- The date of the contract that is the subject of the confirmation request and the existence of any side agreements or modifications to the contract
- Pricing details
- Delivery of all elements in accordance with the contract
- Any undelivered elements’ effect on the functionality of delivered elements
- Right of return, cancellation privileges, or warranty provisions
- Stage of completion, if applicable

- Other pertinent contract provisions
- Amount due to software vendor and payment terms
- Any additional provisions not described in the contract

2.62 Software vendors may enter into oral or written “side agreements” to contracts that effectively modify those contracts. Some side agreements may contain terms prohibiting the customer from disclosing the existence of the side agreement to third parties. Auditors should make inquiries of those familiar with the terms of the sale (for example, sales personnel) to determine whether side agreements exist and to ensure that all terms of the agreement between the company and its customer have been considered when determining revenue recognition. To detect the existence of undisclosed side agreements, the auditor should consider the need to perform substantive procedures, such as reviewing credit memos, sales concessions, or similar marketing allowances granted in subsequent periods for adjustment or reversal of revenues previously recorded.

Test for Delivery

2.63 As described in paragraph 2.15, revenue from software transactions cannot be recognized until the product is delivered. Auditors should obtain evidential matter to corroborate the delivery of the product. In addition to confirming the delivery with the customer, the auditor should consider—

- Reviewing shipping documents and packing slips to ensure all elements were delivered before the end of the reporting period, especially for sales of shrink-wrapped software.
- For software delivered electronically, reviewing documents from the customer confirming the product was received.
- Determining that the product ordered was available and delivered (for example, customers ordered version 5.0, but it was not available, so version 4.5 was shipped).
- Whether there are undelivered elements that are essential to the functionality of the delivered element.

Test for Collectibility

2.64 As described in paragraph 2.15, the collectibility of the fee must be probable to recognize revenue from software transactions. For material transactions, the auditor should consider obtaining evidential matter to support creditworthiness of the customer and the related collectibility of the receivable. For example, the auditor might consider performing a detailed specific accounts receivable balance review to understand why customers are not paying in accordance with terms. Factors to consider include creditworthiness, technical product problems, delays in product release, and company failure to enforce payment terms. Such a review would help the auditor evaluate whether problems with collectibility should affect current revenue recognition or whether the original treatment was appropriate. Also, subsequent cash receipts can provide evidential matter to support the collectibility of the fee.

Test for Contingencies

2.65 The auditor also should determine whether the fee allocated to delivered elements is subject to forfeiture, refund, or other concessions if any of the undelivered elements are not delivered. To make this determination the auditor should consider such factors as—

- The terms of the arrangement specified in the contract.
- Management's intent to provide refunds or other concessions that are not required under the provisions of the arrangement.
- The entity's historical pattern of making refunds or other concessions that were not required under the provisions of the arrangement.

Gather Evidential Matter to Support VSOE or Residual Value

2.66 As described in paragraph 2.18, SOP 97-2 requires that allocation of the fee to various elements in a multiple-element arrangement should be based on VSOE of fair value. SOP 97-2 provides guidance on how to allocate the fee (and discount, if any) among the individual elements of multiple-element arrangements that include upgrade rights, additional software products, PCS, or service elements (other than PCS-related services) that meet the criteria for separate accounting.

2.67 Auditors should gather evidential matter to support VSOE for each element in a multiple-element arrangement. This evidential matter should be consistent with the definition of VSOE specified in SOP 97-2 as amended by SOP 98-9. In obtaining VSOE for each element, auditors need to:

- Examine documentation to support the price charged for the element when it is sold separately.
- Review the company's procedures to establish pricing policies for elements that have not yet been sold separately, and determine that management does not change prices once established.

2.68 In most instances, evidential matter to support VSOE for each element in a multiple-element arrangement may be obtained from an evaluation of a vendor's historical sales of products and services. AICPA Technical Practice Aid (TPA) 5100.57, "Overcoming Presumption of Concessions in Extended Payment Term Arrangements and Software Revenue Recognition," provides the following examples of factors that may be useful in evaluating a vendor's product and service pricing history:

- Similarity of customers
 - Type or Class of Customer
- Similarity of products included
 - Types of Products
 - Stage of Product Life Cycle
 - Elements Included in the Arrangement
- Similarity of license economics
 - Length of Payment Terms
 - Economics of License Arrangement

Test Recognition of Deferred Revenue

2.69 Deferred revenue from software revenue transactions may result from the following circumstances.

- a. The terms of the arrangement do not meet the criteria for revenue recognition as described in SOP 97-2.
- b. As described in paragraph 2.18, sufficient VSOE does not exist to allocate the fee to various elements in a multiple-element arrangement.

- c. As described in paragraphs 2.21 and 2.23, fees for PCS services and services other than PCS-related services generally should be deferred and recognized ratably and as the service is performed, respectively.

2.70 For deferred revenue relating to the items described in 2.69a and b, the auditor should obtain evidential matter to support management's assertion that all deferred revenue has been recognized when the criteria for revenue recognition have been met.

2.71 The recognition of revenue related to service elements depends on when the service is performed. Similarly, when product revenue is deferred because VSOE does not exist, or an undelivered service is essential to the product's functionality, the recognition of that deferred revenue depends on when the service is performed. When the services are performed over several accounting periods, management may be required to estimate the percentage of the service that has been performed to date. SAS No. 57, *Auditing Accounting Estimates* (AICPA, *Professional Standards*, vol. 1, AU sec. 342), provides guidance on evaluating the reasonableness of accounting estimates made by management. In evaluating reasonableness, the auditor should focus on key factors and assumptions underlying the estimate. For estimates relating to the performance of software-related services, the auditor should consider factors and such assumptions as—

- The technical complexity of the project. The more complex a project, the more difficult it may be to estimate the percentage of the work that has been performed.
- Whether an appropriate measure of progress has been selected. For example, output measures may provide a better estimate of progress than costs incurred.¹⁷
- The project maturity. The closer the service project is to completion, the more reliable the estimate of the percentage of the work performed to date.
- The project duration and size.
- The vendor's controls over cost accumulation.
- For cost-based estimates, whether the appropriate pool of costs has been included in the calculation.¹⁸
- The vendor's history of completing similar projects.
- The susceptibility of the project design to change.
- The company's history of revisions of estimates.
- The vendor's history of budgeting services (for example, if the ability to estimate expenses historically has been off by 10 percent, adjust up-front, accordingly).
- Whether there are nonchargeable fees incurred on projects.
- The adequacy of the entity's records on performance of services.

2.72 To evaluate the reasonableness of estimates relating to the performance of services, the auditor should consider such procedures as the following:

- Making inquiries of management, both financial and operational
- Reviewing data, such as time cards, to support the estimate of services performed

¹⁷ SOP 97-2, paragraphs 78 through 91, includes detailed guidance on measuring progress to completion.

¹⁸ See footnote 17.

- Review management's current estimate to complete the project
- Confirming the stage of completion with the customer

Analyze Allowance for Sales Returns

2.73 As described in paragraph 2.27, management is required to estimate sales returns at the time the sale of the product is made. Auditors should consider performing the following procedures as a means to obtain evidential matter to evaluate the reasonableness of management's estimate.

- Review credit memos and accounts receivable, revenue, and marketing and promotion expense adjustments made after the end of the reporting period.
- Analyze the company's historical experience with sales returns of similar products.
- Make inquiries regarding the presence of the factors listed in paragraph 8 of FASB Statement No. 48 and, if applicable, the additional factors listed in paragraph 2.28 of this chapter, to determine whether the amount of returns can be reasonably estimated.

Presentation and Disclosure

2.74 Assertions about presentation and disclosure address whether the classification, description, and disclosure of revenue in the entity's financial statements are in conformity with GAAP. The auditor should evaluate whether the presentation and disclosure of software revenue are in conformity with GAAP. As noted in SAS No. 69, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles* (AICPA, *Professional Standards*, vol. 1, AU sec. 411.04), as amended, the auditor's opinion as to whether financial statements are presented in conformity with GAAP should be based on the auditor's judgment as to whether—

- a. The accounting principles selected and applied have general acceptance.
- b. The accounting principles are appropriate in the circumstances.
- c. The financial statements, including the related notes, are informative of matters that may affect their use, understanding, and interpretation.
- d. The information presented in the financial statements is classified and summarized in a reasonable manner, that is, neither too detailed nor too condensed.
- e. The financial statements reflect the underlying transactions and events in a manner that presents the financial position, results of operations, and cash flows stated within a range of acceptable limits, that is, limits that are reasonable and practicable to attain in financial statements.

2.75 Marketing arrangements may vary among software distributors and resellers. For example, some distributors may not take title to the software sold to the customer and have no risk of loss or other responsibility for the product. In those situations a question may arise as to whether revenue from the sale of the software should be reported "gross" with a separate display of cost of

sales to arrive at gross profit or whether the margin on the sale should be reported “net,” similar to a commission. Emerging Issues Task Force (EITF) Issue No. 99-19, *Reporting Revenue Gross as a Principal versus Net as an Agent*, states that whether a company should recognize revenue based on (a) the gross amount billed to a customer because it has earned revenue from the sale of the goods or services or (b) the net amount retained (that is, the amount billed to the customer less the amount paid to a supplier) because it has earned a commission or fee is a matter of judgment that depends on the relevant facts and circumstances. EITF Issue No. 99-19 sets forth factors or indicators to consider in making the evaluation.

2.76 Regulation S-X requires SEC registrants to disclose separately, on the face of the income statement, revenue from the sales of products, services, and other products. In addition, the interpretative response to Question 1 in section B of SAB No. 101 states that the SEC staff believes that costs related to each type of revenue similarly should be reported separately on the face of the income statement.

2.77 With respect to disclosure, paragraph 12 of APB Opinion 22, *Disclosure of Accounting Policies*, states:

In general, the disclosure should encompass important judgments as to appropriateness of principles relating to recognition of revenue and allocation of asset costs to current and future periods; in particular it should encompass those accounting principles and methods that involve any of the following:

- a. A selection from existing acceptable alternatives;
- b. Principles and methods peculiar to the industry in which the reporting entity operates, even if such principles and methods are predominantly followed in that industry;
- c. Unusual or innovative applications of generally accepted accounting principles (and, as applicable, of principles and methods peculiar to the industry in which the reporting entity operates).

2.78 Accordingly, software vendors should consider disclosing their accounting policies concerning:

- Revenue recognition for each significant type of revenue (for example, product sales; maintenance and PCS; installation and other services; and barter transactions)
- Accounting for discounts, incentives and sales returns, and the methods used to develop estimates of significant sales allowances
- Amortization of deferred revenues

2.79 SAS No. 32, *Adequacy of Disclosure in Financial Statements* (AICPA, *Professional Standards*, vol. 1, AU sec. 431), requires the auditor to express a qualified or an adverse opinion if management omits from the financial statements, including the accompanying notes, information that is required by GAAP. The auditor should review the financial statements to determine whether disclosures are adequate with regard to such matters as software revenue recognition policies, information about major customers or significant concentrations of credit risk, related-party transactions, and the effect of significant revisions to estimates in percentage-of-completion contracts.

Written Representations From Management

2.80 SAS No. 85, *Management Representations*, as amended by SAS No. 89, *Audit Adjustments* (AICPA, *Professional Standards*, vol. 1, AU sec. 333), requires the auditor to obtain written representations from management and provides guidance concerning the representations to be obtained. Such representations are part of the evidential matter the auditor obtains but are not a substitute for the application of the substantive auditing procedures outlined in this chapter. SAS No. 85 (AU sec. 333.07) states that the representation letter ordinarily should be tailored to include appropriate representations from management relating to matters specific to the entity's business or industry. Representations specific to software revenue transactions may include the following.

- Management is not aware of any side agreements, either written or oral, to its software revenue arrangements.
- The company has recognized revenue in accordance with the provisions of SOP 97-2 and other authoritative literature.
- Management intends not to provide refunds or concessions that are not required under the provisions of the arrangement, and its historical performance supports such intent.
- Management does not anticipate providing PCS services that are not required under the provisions of the arrangement without appropriate additional consideration.
- If there is a situation where VSOE for an element not yet being sold was established by management having the authority to do so, such VSOE should be disclosed in a representation together with a statement that the company will not change the prices of individual elements once established.
- Management believes that unbilled revenue is realizable in accordance with the provisions of the contract.
- Estimates used in estimating returns are reasonable, to the best of management's knowledge and ability.
- Unspecified upgrades offered during the PCS arrangement are expected to remain minimal and infrequent.

2.81 SAS No. 85 also states that in certain circumstances, the auditor may want to obtain written representations from other individuals. The auditor should consider obtaining additional representations relating to revenue assertions directly from the software vendor's operating management, such as sales personnel.

Chapter 3

Auditing Revenue Transactions in the High-Technology Manufacturing Industry*

Overview of the High-Technology Manufacturing Industry

3.01 The term *high technology* is not defined precisely, and high-technology manufacturing includes several industries whose participants provide a broad range of products and services to numerous customers on various terms. In general, high-technology companies are involved in the practical application of physical science and the use of scientific theories and methods to develop new products that enhance the way we live.

3.02 This chapter considers the auditing and accounting for revenue recognition transactions for companies involved in the manufacture of high-technology products, such as—

- Computers, including personal computers (PCs), systems, and servers (ranging up to large-scale systems, such as mainframes and supercomputers) and workstations.
- Computer peripheral equipment, such as storage devices, monitors, and printers.
- Semiconductors, including analog and digital semiconductors, such as microprocessors, memory chips, and logic devices.
- Electronic products and components, such as electron tubes, printed circuit boards, capacitors, resistors, transformers, and other items that are used in a variety of industries.
- Telecommunications, data communications, networking, medical, analytical, diagnostic, and other types of equipment that are manufactured with electronic products and components.¹

3.03 Auditors of high-technology manufacturing companies will need to obtain an understanding of the client's products, services, and distribution processes, and the terms and conditions of sales arrangements. Such an understanding will enhance the auditor's ability to plan and perform auditing procedures for revenue transactions of high-technology manufacturers. In addition, auditors should keep apprised of new accounting guidance that is being developed, such as that for multiple-element arrangements involving services, products, or both, that are not performed or delivered to the customer at the same time. For example, the appendix to this guide lists pending Emerging Issues Task Force (EITF) issues under consideration that could affect revenue recognition by manufacturers of high-technology products.

Competitive Environment

3.04 *Aggressive pricing and sales concessions.* The high-technology manufacturing industry is intensely competitive, and some segments of the

* See chapter 1, "Overview: Audit Issues in Revenue Recognition," of this Guide for a related discussion of the matters presented in this chapter.

¹ See paragraphs 3.13–3.14 for guidance on sales of products that include embedded software.

industry—most notably, the PC segment—sell what is considered to be a commodity. When a product is considered a commodity, the primary means of differentiation is price, and it is not unusual for participants in the industry to engage in aggressive pricing practices or offer generous sales concessions to gain or retain market share.

3.05 *Rapid technological change.* Short product life cycles are a fundamental characteristic of the high-technology manufacturing industry. For example, the life cycle of a desktop PC is thought to be two years or less, and it is estimated that up to 50 percent of profits for PCs and related products are now generated in the first three to six months of sales. Constant technological advancement affects the industry in many ways, including the following.

- The threat of imminent product obsolescence provides an additional incentive for high-technology manufacturers to offer discounts or provide other incentives and concessions as a way to make sales and move inventory. As described in paragraph 3.08, many concessions raise questions about the propriety or timing of revenue recognition.
- Rapid technological change has resulted in the creation of ever more complex high-technology products. In some instances, it may be difficult to determine whether the product will perform as required at the time of shipment. To overcome customer resistance in these situations, manufacturers may engage in a number of practices that have revenue recognition implications. These practices include—
 - Delivering products to customers for demonstration purposes.
 - Providing liberal evaluation, acceptance, or cancellation clauses in the sales contract.
 - Offering separately priced extended warranties or maintenance agreements.
 - Promising the delivery of future products. Before these products are complete, the company will ship current products to the customer.
- The quick pace of innovation can force companies to speed new products to market. The constant introduction of new products may raise questions about an entity's ability to estimate product returns.
- The rapid pace of change results in companies constantly evaluating and modifying their business model and how their products are brought to market. For example, as products near the end of their life cycle, a company may offer sales incentives or introduce other strategies for extending the sales life of the product.

3.06 *Pressure to meet earnings expectations.* For publicly traded manufacturers, the market price of the company's stock may have important strategic implications. High-technology companies frequently use company stock and stock options to compensate management, and the value of that compensation allows those companies to attract and retain top talent. Additionally, some segments of the industry are undergoing consolidation as companies seek ways to maintain growth or create marketing, production, or distribution efficiencies. An acquiring company's common stock typically is used to make these acquisitions, and so an increasing stock price will greatly enhance a company's ability to pursue its business strategy.

3.07 Stock analysts commonly use revenue growth and market share to value high-technology companies. This focus creates pressure to meet quarterly or annual revenue expectations, which in turn creates an incentive for entities to complete sales by the end of the reporting period. Even entities that

are not yet public but are positioning themselves for a public offering have an incentive to demonstrate a history of recent revenue growth. For this reason, it is common for high-technology companies to report a proportionately higher number of sales near the end of a reporting period. As described in paragraph 3.40, significant transactions near the end of a reporting period generally lead to a greater inherent risk of material misstatement.

Characteristics of Revenue Transactions

3.08 In an industry as varied as high-technology manufacturing, invariably there will be significant differences among companies regarding the types of products they sell and how they are sold. Characteristics of high-technology revenue transactions that may affect revenue recognition include the following.

- *The move toward total-solution selling and-bundled sales.* Many companies in the high-technology manufacturing sector sell standardized products. For example, manufacturers of electronic components, semiconductors, and to a large degree, computer peripherals, are engaged primarily in the design, manufacture, and sale of a product. The product is shipped to a customer, who takes immediate title and bears all the responsibility for installation.

However, other companies (most notably computer manufacturers) are moving toward providing their customers with a total solution, in response to customer need for outsourcing information technology (IT) functions and a desire to work with vendors that provide one-stop shopping. This trend leads to companies migrating from shipping hardware to the customer site and having the customer be responsible for completing the implementation, to the company selling a “total solution,” which requires installation, customization, and any other services necessary to make the product functional. The customer may not accept the solution until functionality is achieved.

Some entities may not have the resources to provide “total solutions” but nevertheless may bundle their products together with other products or services. For example, this strategy may be undertaken as a way to increase sales or differentiate the company from its competitors. The bundling of installation or other services with product sales (whether or not these are part of a “total solution”) can complicate the revenue recognition process, as described in paragraph 3.27.

- *Indirect vs. direct selling.* Some high-technology manufacturers sell their products directly to end-users, typically with standard rights of return. Direct consumer sales (and small dollar sales to other end users) usually have relatively standard terms and conditions.

Other manufacturers use a direct sales approach combined with a network of value-added resellers (VARs) and distributors to sell their products to end users. Sales made through distributors, as well as significant single sales (in terms of size to the seller or purchaser), often can have unique, nonstandard terms. It is common for the manufacturer to provide incentives or sales concessions to their VARs and distributors that go beyond the rights of return granted to end users. Many of the incentives and concessions granted to distributors raise revenue recognition issues. The most common of sales concessions include—

— Price protection agreements.²

² A price protection agreement clause requires the manufacturer to rebate or credit a portion of the sales price if the manufacturer subsequently reduces its price for a product and the distributors and value-added resellers (VARs) still have rights with respect to that product.

- Guaranteed margin agreements.
 - Stock balancing arrangements.
 - Sales subject to sale to the end user.
 - Extended payment terms.
 - Issuance of equity or other equity instruments to customers.
- *Bill and hold sales.* It is not uncommon for high-technology companies to enter into bill and hold transactions. In a bill and hold transaction, a customer agrees to purchase the goods but the seller retains physical possession until the customer requests shipment to designated locations. Normally, such an arrangement does not qualify as a sale because delivery has not occurred. Under certain conditions, however, when a buyer has made an absolute purchase commitment and has assumed the risks and rewards of the purchased product but is unable to accept delivery because of a compelling business reason, bill and hold sales may qualify for revenue recognition.
 - *International sales.* Technology manufacturing companies may make sales in non-U.S. legal jurisdictions. The laws in these jurisdictions relating to product sales can vary significantly from U.S. laws. For example, some countries may prohibit the billing for goods until delivery occurs or may have rules regarding transfer of title (for example, title may not transfer until delivery or receipt of payment) that may be significantly different from U.S. rules.

Summary of Significant Accounting Guidance³

3.09 High-technology manufacturing companies can be involved in a variety of revenue transactions. Certain of these transactions fall within the scope of specific authoritative literature. For other transactions, only the broad revenue recognition criteria specified in the Financial Accounting Standard Board's (FASB's) conceptual framework exists.

3.10 The appendix of this Guide lists authoritative and nonauthoritative accounting literature relevant to revenue recognition in the high-technology manufacturing industry.

3.11 To assess whether the client's revenue recognition policies are consistent with the applicable accounting literature, auditors should identify and understand the terms of the entity's revenue transactions and whether these terms are consistent for all customer types. Auditors wishing to determine whether a particular transaction falls within the scope of a particular standard should refer to the relevant pronouncement.

Is the Product Sold Together With Services?

3.12 As described in paragraph 3.08, some high-technology manufacturers provide computer "solutions" to their customers or otherwise bundle together their products and services. The accounting guidance applicable to these transactions is summarized in paragraph 3.27.

³ This discussion provides an overview of the significant accounting guidance for revenue recognition most frequently applicable to high-technology manufacturing companies. This discussion is intended merely to provide background information for the auditing guidance that follows. Readers who wish to implement accounting standards related to revenue recognition for high-technology companies should refer to the applicable pronouncements.

Applicability of SOP 97-2, *Software Revenue Recognition*

3.13 When products are sold without services, the accounting for the sale depends on whether the product includes embedded software and, if so, whether that software is incidental to the product as a whole. When the software is *not* incidental, the software and related services portion of the transaction should be accounted for in accordance with the guidance contained in Statement of Position (SOP) 97-2, *Software Revenue Recognition*, as amended by SOP 98-9, *Modification of SOP 97-2, Software Revenue Recognition, With Respect to Certain Transactions*.

3.14 Indicators of whether software is incidental to a product as a whole include, but are not limited to—

- Whether the software is a significant focus of the marketing effort or is sold separately.
- Whether the vendor is providing postcontract customer support.
- Whether the vendor incurs significant costs that are within the scope of FASB Statement of Financial Accounting Standards No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed*.

Accounting for Product Sales

3.15 The conceptual basis for revenue recognition is contained in FASB Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*. Paragraph 83 states that recognition of revenue involves consideration of two factors, (a) being realized or realizable and (b) being earned. Paragraph 83b states:

Revenues are not recognized until earned. An entity's revenue-earning activities involve delivering or producing goods, rendering services, or other activities that constitute its ongoing major or central operations, and revenues are considered to have been earned when the entity has substantially accomplished what it must do to be entitled to the benefits represented by the revenues. [Footnote omitted.]

3.16 Paragraph 84a of FASB Concepts Statement No. 5 states that revenues from manufacturing and selling activities are commonly recognized at time of sale, usually meaning delivery.

3.17 Revenue typically is considered to be realizable and earned when the product has been shipped and the risk of loss and title has been passed to the customer. Payment must be anticipated and deemed probable, which requires evidence that the customer desired shipment of the product. However, for high-technology companies, judgment may be required to determine when the earnings process is complete, for example—

- In the case of custom products, when uncertainty exists about the ultimate functionality of the product, the earnings process may not be complete until the equipment is determined to be operational and the customer has accepted it.
- Distributors, whether contractually obligated to or not, may not take the risks of ownership of the inventory until the product ultimately is sold to the end user. The financial condition of the distributor may also indicate that the distributor cannot financially complete the transaction before selling the product to the end user. Under these circumstances, the earnings process may not be complete until the end user purchases the product.

- The existence of significant postsales seller obligations may indicate that the earnings process is not complete until after the obligations have been fulfilled.

3.18 Securities and Exchange Commission (SEC) Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, summarizes certain of the SEC staff's views on the application of generally accepted accounting principles (GAAP) to revenue recognition in financial statements of SEC registrants. SAB No. 101 states that "the staff believes that revenue generally is realized or realizable and earned when all of the following criteria are met."

- a. *Persuasive evidence of an arrangement exists.* Many high-technology manufacturers use written contracts to document the terms of an arrangement, particularly when the arrangement is complex. In other situations, the manufacturing company may use a purchase order or online authorization from the customer to document its understanding with the customer.

The interpretive response to Question 2 in SAB No. 101 states that the presence of one or more of the following characteristics in a transaction precludes revenue recognition, even if title to the product has passed to the buyer, because the substance of the transaction is that of a consignment or a financing. Such arrangements require a careful analysis of the facts and circumstances of the transaction, as well as an understanding of the rights and obligations of the parties, and the seller's customary business practices. The presence of one or more of the following characteristics may preclude revenue recognition:

- The buyer has the right to return the product and—
 - The buyer does not pay the seller at the time of sale, and the buyer is not obligated to pay the seller at a specified date or dates.
 - The buyer does not pay the seller at the time of sale but rather is obligated to pay at a specified date or dates, and the buyer's obligation to pay is contractually or implicitly excused until the buyer resells the product or subsequently consumes or uses the product.
 - The buyer's obligation to the seller would be changed (for example, the seller would forgive the obligation or grant a refund) in the event of theft or physical destruction or damage of the product.
 - The buyer acquiring the product for resale does not have economic substance apart from that provided by the seller.
 - The seller has significant obligations for future performance to directly bring about resale of the product by the buyer.
- The seller is required to repurchase the product (or a substantially identical product or processed goods of which the product is a component) at specified prices that are not subject to change except for fluctuations due to finance and holding costs, and the amounts to be paid by the seller will be adjusted, as necessary, to cover substantially all fluctuations in costs incurred by the

buyer in purchasing and holding the product (including interest). Indicators of the latter condition include—

- The seller provides interest-free or significantly below-market financing to the buyer beyond the seller's customary sales terms and until the products are resold.
 - The seller pays interest costs on behalf of the buyer under a third-party financing arrangement.
 - The seller has a practice of refunding (or intends to refund) a portion of the original sales price representative of interest expense for the period from when the buyer paid the seller until the buyer resells the product.
 - The transaction possesses the characteristics set forth in EITF Issue No. 95-1, *Revenue Recognition on Sales with a Guaranteed Minimum Resale Value*, and does not qualify for sales-type lease accounting.
 - The product is delivered for demonstration purposes.
- b. *Delivery has occurred or services have been rendered.* The SEC staff believes that delivery has not occurred unless the buyer has taken title to the product and has assumed the risks and rewards of ownership, and the seller has not retained any specific performance obligations indicating the earnings process is not complete. Typically, this occurs when the product is delivered to the buyer's delivery site (if the terms are "FOB destination") or when the product is turned over to a carrier for shipment to the customer (if the terms are "FOB shipping point").⁴

After delivery, if uncertainty exists about customer acceptance, revenue should not be recognized until acceptance occurs. As noted in paragraph 3.05, it is not uncommon for high-technology manufacturers to include acceptance clauses in their arrangements with their customers. Customer acceptance provisions may be included in a contract, among other reasons, to enforce a customer's rights to—

- Test the delivered product.
- Require the seller to perform additional services subsequent to delivery of an initial product or performance of an initial service (for example, a seller is required to install or activate delivered equipment).
- Identify other work necessary to be done before accepting the product.

When contractual acceptance provisions exist, SAB No. 101 states "the staff generally believes that the seller should not recognize revenue until customer acceptance occurs or the acceptance provisions lapse." In Question 5 of the related Staff Accounting Bulletin No. 101: *Revenue Recognition in Financial Statements—Frequently Asked Questions and Answers* (SAB No. 101 FAQ), the staff notes that "formal customer sign-off is not always necessary to recognize revenue provided that the seller objectively demonstrates that the

⁴ See Question 1 in Staff Accounting Bulletin No. 101: *Revenue Recognition in Financial Statements—Frequently Asked Questions and Answers* (SAB No. 101 FAQ) concerning the consideration of transfer of title in non-U.S. jurisdictions.

criteria specified in the acceptance provisions are satisfied.” The staff observes that customer acceptance provisions generally take one of four general forms that are described in Question 5, as well as the staff’s assessment of whether the customer acceptance provisions should result in revenue deferral.

The interpretive response to Question 3 of SAB No. 101 also sets forth the criteria that must be met in order to recognize revenue when delivery has not occurred, such as in bill and hold transactions. See paragraph 3.34 of this chapter.

- c. *The seller’s price to the buyer is fixed or determinable.* If the customer has the right to cancel or terminate the agreement, the sales price is neither fixed nor determinable, and therefore revenue recognition should be deferred until the cancellation privilege lapses. SAB No. 101, section 4, states:

A company’s contracts may include customer cancellation or termination clauses. Cancellation or termination provisions may be indicative of a demonstration period or an otherwise incomplete transaction. Examples of transactions that financial management and auditors should be aware of and where such provisions may exist include “side” agreements and significant transactions with unusual terms and conditions. These contractual provisions raise questions as to whether the sales price is fixed or determinable. The sales price in arrangements that are cancelable by the customer are neither fixed nor determinable until the cancellation privileges lapse. If the cancellation privileges expire ratably over a stated contractual term, the sales price is considered to become determinable ratably over the stated term. Short-term rights of return, such as thirty-day money-back guarantees, and other customary rights to return products are not considered to be cancellation privileges, but should be accounted for in accordance with FASB Statement No. 48, *Revenue Recognition When Right of Return Exists*.

- d. Collectibility is reasonably assured.

3.19 Rights of return. It is common for high-technology manufacturers to provide their customers with rights of return. FASB Statement No. 48 specifies how an entity should account for sales of its products in which the buyer has a right to return the product. Paragraph 6 of FASB Statement No. 48 provides a list of conditions, all of which must be met to recognize revenue from the transaction at the time of sale. One of these conditions is that the amount of future returns can be reasonably estimated.

3.20 Paragraph 8 of FASB Statement No. 48 describes a number of factors that may impair (but not necessarily preclude) the ability to make a reasonable estimate of the amount of future returns. Among the factors that are most prevalent in the high-technology industry are the following.

- The product is subject to significant obsolescence or changes in demand.
- There is an absence of or lack of relevance of historical experience to the circumstances because the product, market, or customer is new.

3.21 Entities that make sales through distribution channels may be unable to reasonably estimate the amount of future returns. For example, this may occur when the entity does not receive accurate reporting from its distributors regarding inventory levels in the distribution channels and the current level of sales to end users.

3.22 When an entity is unable to reasonably estimate the amount of future returns, revenue recognition should be postponed until the right of return substantially expires or until such time as the returns can be reasonably estimated and the other conditions listed in FASB Statement No. 48 have been met.

3.23 Auditors of SEC registrants should be familiar with the interpretive response to Question 9 in SAB No. 101. In that response, the SEC staff lists the following factors, in addition to those provided in FASB Statement No. 48, that may affect or preclude the ability to make reasonable and reliable estimates of product returns.

- Significant increases in or excess levels of inventory in a distribution channel (sometimes referred to as “channel stuffing”)
- Lack of “visibility” into or the inability to determine or observe the levels of inventory in a distribution channel and the current level of sales to end users
- Expected introductions of new products that may result in the technological obsolescence of and larger-than-expected returns of current products. As described in paragraph 3.05, the continuous introduction of new products is one of the fundamental characteristics of the high-technology industry.
- The significance of a particular distributor to the registrant’s (or reporting segment’s) business, sales, and marketing
- The newness of a product
- The introduction of competitors’ products with superior technology or greater expected market acceptance, and other factors that affect market demand and changing trends in that demand for the registrant’s products.

3.24 In considering the application of FASB Statement No. 48 to a new company or a company entering a new line of business, the SEC staff believes the focus should be on the substantive factors that may affect the registrant’s ability to make reasonable estimates of product returns. For example, companies may adopt new business models that involve significant changes to the way similar products have traditionally been supplied, such as the use of new distribution channels, the elimination of distributors or resellers, or the supply of a broader selection of products. Such factors may impair a company’s ability to make a reasonable estimate of returns.

3.25 In circumstances where a registrant concludes that it cannot reasonably estimate the actual return rate due to a product’s limited history, the SEC staff also believes that deferring revenue based on an estimate of the maximum possible returns, and recognizing revenue for the portion of the sales that exceeds the maximum estimated return rate, is inconsistent with FASB Statement No. 48.⁵

3.26 In some sales of high-technology equipment, the seller must install the equipment at the customer’s site. The arrangement may include a retainage that the customer is not obligated to pay until installation is complete. If, before completing the installation, the customer has a right to return the equipment, FASB Statement No. 48, paragraph 6b, may preclude revenue recognition to the extent of the retainage.

⁵ See Question 27 in SAB No. 101 FAQ.

Accounting for Transactions That Involve Both Products and Services

3.27 Note: The EITF currently is developing accounting guidance applicable to multiple-element arrangements involving services, products, or both, that are not performed or delivered to the customer at the same time. Pending issuance of this guidance, SAB No. 101 and the related SAB No. 101 FAQ provide guidance to SEC registrants on accounting for multiple-element arrangements. Question 4 of SAB No. 101 FAQ states that the SEC will not object to a reasoned method of accounting that is applied consistently and disclosed appropriately and that includes the following conditions:

- To be considered a separate element, the product or service in question represents a separate earnings process. The best indicator that a separate element exists is that a vendor sells or could readily sell that element unaccompanied by other elements.
- Revenue is allocated among the elements based on the fair value of the elements. The fair values used for the allocations should be reliable, verifiable, and objectively determinable. Additional guidance on allocating among elements may be found in SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*, paragraphs 35 through 42; SOP 97-2, paragraphs 9 through 14; and SOP 98-9. If sufficient evidence of the fair values of the individual elements does not exist, revenue would not be allocated among them until that evidence exists. Rather, revenue would be recognized as earned using revenue recognition principles applicable to the entire arrangement as if it were a single element arrangement.
- If an undelivered element is essential to the functionality of a delivered element, no revenue allocated to the delivered element is recognized until that undelivered element is delivered. The interpretive response to Question 3 in SAB No. 101 states that if an arrangement (that is, outside the scope of SOP 81-1) requires the delivery or performance of multiple deliverables, or elements, the delivery of an individual element is considered not to have occurred if there are undelivered elements that are essential to the functionality of the delivered element because the customer does not have full use of the delivered element. Question 7 of SAB No. 101 FAQ describes examples of indicators that illustrate whether undelivered installation or other services are essential to the functionality of delivered equipment. In addition, the exhibit at the end of SAB No. 101 FAQ includes several examples of the analysis of revenue recognition issues in circumstances of undelivered products or services.

Accounting for Services

3.28 As described in paragraph 3.08, some manufacturers have begun to provide services in addition to selling products. When an entity provides services, management should consider whether to apply contract accounting.

3.29 Contract accounting. Contracts to design, develop, manufacture, or modify complex high-technology equipment to a buyer's specification may be subject to the requirements of Accounting Research Bulletin (ARB) No. 45, *Long-Term Construction-Type Contracts*, as supplemented by SOP 81-1. For example, as described in paragraph 3.08, some high-technology manufacturers are involved in selling complete hardware, software, and service "solutions" to

their customers. When solution selling involves significant customization of the computer system to the customer's specifications, contract accounting may be appropriate.

3.30 For services that do not qualify for contract accounting, revenue generally is recognized ratably over the contractual period or as the services are performed.

Accounting for Maintenance Agreements and Extended Warranties

3.31 Some manufacturers sell their products with maintenance agreements or extended warranties. FASB Technical Bulletin 90-1, *Accounting for Separately Priced Extended Warranty and Product Maintenance Contracts*, provides accounting guidance for these types of agreements. That pronouncement requires that revenue from these transactions be deferred and recognized in income on a straight-line basis over the contract period, except in those circumstances in which sufficient historical evidence indicates that the costs of performing services under the contract are incurred on other than a straight-line basis.

3.32 In some circumstances, warranty and product maintenance agreements are developed, marketed, and administered by an administrator whose business focuses on these activities. The administrator may enter into an arrangement with a manufacturer that provides for the manufacturer to offer the warranty to customers who purchase applicable products. For each warranty sold, the manufacturer pays a specified fee to the administrator who has responsibility for servicing the contracts. The administrator generally uses a portion of its fee to purchase insurance from an insurer that agrees to accept the risk of loss under the contracts. Although the insurance company assumes the risk of loss, it does not legally become the obligor under the contracts. Depending on applicable state law, either the manufacturer or the administrator that purchased the insurance is the legal obligor.

3.33 In such circumstances, SEC staff has noted that a registrant who is the obligor under the warranty contracts should recognize revenue over the life of the underlying contracts as specified in Technical Bulletin 90-1 even if the risk of loss has been passed to another party. The staff also concluded that Technical Bulletin 90-1 does not apply when the registrant is not the named obligor. When the manufacturer is the obligor, the administrator is acting as an agent with regard to the insurance contract between the manufacturer and the insurance company. When the administrator is the obligor, the manufacturer is acting only as an agent with regard to the warranty contract between the administrator and the consumer. In either case, the nonobligor registrant should present only its net commission as revenue as it performs under the contracts.

Accounting for Bill and Hold Sales

3.34 The interpretive response to Question 3 in SAB No. 101 incorporates SEC Accounting and Auditing Enforcement Release (AAER) No. 108 on bill and hold sales. AAER No. 108 specifies certain conditions and criteria, all of which must be met, in order for a bill and hold transaction of a public company to qualify for revenue recognition. In addition, it specifies certain factors that should be considered in evaluating whether a bill and hold transaction meets

the requirements for revenue recognition. Although AAER No. 108 is directed specifically to transactions of public companies, management and auditors of nonpublic companies may find it useful in analyzing bill and hold transactions. See chapter 1 of this Guide for a discussion of AAER No. 108 on bill and hold sales.

Accounting for Price Protection Agreements

3.35 A price protection clause requires the manufacturer to rebate or credit a portion of the sales price if the manufacturer subsequently reduces its price for a product and the distributors and VARs still have rights with respect to that product. A manufacturer should provide appropriate allowances at the date of revenue recognition for price concessions; however, revenue should not be recognized until reasonable and reliable estimates of the effects of price concessions can be made.

Accounting for Sales With a Guaranteed Minimum Resale Value

3.36 EITF Issue No. 95-1 provides guidance when a manufacturer sells equipment to a purchaser and guarantees that the purchaser will receive a minimum resale amount at the time the equipment is disposed of. The seller may agree to (a) reacquire equipment at a guaranteed price at specified time periods as a means to facilitate its resale or (b) pay the purchaser for the deficiency. According to this consensus position, the manufacturer is precluded from recognizing a sale of equipment if the manufacturer guarantees the resale value of the equipment to the purchaser. Rather, the manufacturer should account for the transaction as a lease, using the principles of lease accounting described in FASB Statement No. 13, *Accounting for Leases*.

Audit Planning

3.37 Statement on Auditing Standards (SAS) No. 22, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 311), requires auditors to gain an understanding of their client's business and the industry in which it operates. This understanding should be obtained during the planning phase of the audit, and the level of knowledge should be sufficient to enable the auditor to understand the events, transactions, and practices that may have a significant effect on the financial statements. For audits of high-technology companies, the auditor should consider obtaining information relating to—

- The types of products (or combined products and services) being developed and marketed as well as their corresponding life cycles.
- Whether those products are relatively standard or require significant customization.
- Whether the company has a practice of allowing customers to return products for new or upgraded models.
- Whether the company sells standalone products or a bundle of products and services to its customers that includes hardware, software, peripherals, and installation and other services (that is, multiple-element arrangements).
- The company's current marketing programs, for example, pricing incentives and the nature of any incentives that may affect the timing of revenue recognition.

- Whether the company uses a standard form of sales agreement; if standard sales agreements are not used, the processes by which sales agreements are evaluated for propriety of revenue recognition.
- Compensation plans for management and sales personnel that may provide an incentive to misstate revenues.
- Factors used by stock analysts to value the entity.
- The general terms of the company's arrangements with distributors and VARs, if the company uses them. Paragraph 3.08 describes some of the terms a company may have with its distributors that may increase the risk of material misstatement.
- The types of arrangements and warranty provisions the company typically enters into with its end-user customers.
- If sales are made internationally, the laws in the local jurisdiction relating to billing, transfer of title, or other items that may affect revenue recognition.
- The competitive environment.

3.38 After gaining an understanding of the revenue transactions entered into by the entity, the auditor should assess adequacy of the entity's accounting policies for revenue recognition for each type of transaction and class of customer. The auditor should determine whether those policies are in accordance with GAAP.

3.39 The auditor should gain an understanding of the products (or products and services) being sold by the company to determine whether certain characteristics of the product itself pose revenue recognition issues. For example, the auditor should consider whether—

- The product contains embedded software that is not incidental and that would require the transaction to be accounted for under SOP 97-2 (as described in paragraphs 3.13 through 3.14).
- The complexity of the product creates uncertainty about the ultimate functionality of the product, which would require a deferral of revenue (as described in paragraph 3.17).
- The product is new or subject to significant obsolescence (that is, it is nearing the end of its life cycle), which would preclude management from reasonably estimating product returns (as described in paragraph 3.20).
- The company enters into price protection or similar agreements with customers and has the ability to make reasonable and reliable estimates of the price concessions granted.
- The product is sold as part of a bundle that may include hardware, software, design, implementation or other services, which may require separate revenue recognition policies for each element (as described in paragraph 3.27), or which may require contract accounting if the elements cannot be separated.⁶
- The postsale obligations of the seller are significant (as described in paragraph 3.17). In assessing significance, the auditor should consider the estimated cost of the obligation, whether the obligation is routine, and the significance of the obligation to the customer (that is, were these separately negotiated terms).

⁶ Statement of Position (SOP) 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*, paragraphs 13 and 14, provide specific criteria for the application of contract accounting.

The following are examples of circumstances any one of which would likely lead to the conclusion that the remaining performance obligations are significant.

- The performance period is lengthy. The term *performance period* could relate either to the time needed to complete the remaining activity (for example, installation requires two weeks) or the time between the delivery of the initial elements and the delivery of the later element (for example, two weeks elapse between the date the equipment is delivered and the date it is installed). There is no “bright line” for determining whether the period is lengthy.
- The cost of performing the remaining activity is other than insignificant. Again, there is no “bright line” for determining whether the cost is other than insignificant. Additionally, note that the converse of this circumstance (that is, the cost of the remaining activity is insignificant) is not itself sufficient when evaluating whether a continuing obligation should affect revenue recognition.
- The skills required to complete the remaining activity are specialized, that is, they are not widely available. For example, the equipment has been delivered but has not yet been calibrated and the seller’s technicians are the only ones who can properly calibrate the equipment.
- The due date of a meaningful portion of the sales price is subsequent to the performance of the remaining activity. For example, the payment terms stipulate that 20 percent of the purchase price is due subsequent to installation.
- A meaningful portion of the payments already made by the customer would be refundable if the remaining activity is not completed successfully. The terms of the sales contract as well as past practice should be considered when evaluating whether a portion of the purchase price would be refundable.

These circumstances are not all-inclusive. As discussed above, the customer’s perspective and the functionality of the delivered elements are important in assessing whether the remaining activities are inconsequential or perfunctory.

Inherent Risk Considerations

3.40 The inherent risk for an assertion about revenue recognition in the high-technology manufacturing industry is its susceptibility to a material misstatement, assuming there are no related controls. Examples of circumstances that might lead the auditor to assess as high the inherent risk of misstatement of assertions about revenue recognition of high-technology companies include—

- *Transactions with distributors and VARs.* Transactions with distributors and VARs affect revenue recognition in a number of ways, including the following.
 - As described in paragraph 3.08, companies typically offer distributors and VARs price protection and other types of incentives that may affect the timing and amount of revenue recognition.
 - As described in paragraph 3.18, certain arrangements with distributors and VARs, whether contractual or implied, may require revenue to be deferred until the products are sold by the distributor to the end user.

- As described in paragraph 3.21, the availability of reliable information about inventory and sales levels provided by the distributor and VARs to the seller may preclude the seller from developing a reasonable estimate of sales returns.
- *“Solution selling” and bundled sales.* As described in paragraph 3.08, companies in some industry sectors are migrating toward providing total, customized solutions and other bundled sales to their customers. These bundled sale arrangements include the sale of hardware and some or all of the following: software, peripherals, installation, customization, and other services. When transactions contain multiple elements, it may be difficult to determine the amount and timing of the related revenue recognition.
- *The potential for side agreements.* The company and its customers may enter into side arrangements that remain either undocumented or documented in agreements separate from the main contract. The potential for side agreements is greater for complex or material transactions. When side agreements exist, there is a greater risk that accounting personnel will not be aware of all of the terms of the transaction, which may result in improper revenue recognition.
- *Transactions near the end of the period.* As described in paragraph 3.07, it is common for high-technology companies to have a proportionately higher number of transactions near the end of the period. These transactions may be characterized by significant sales incentives and other conditions that affect revenue recognition. There also is an increased risk that all documents necessary to provide evidence of an arrangement between the parties have not been executed fully.
- *Transactions that indicate the earnings process is not complete.* As described in paragraph 3.15, revenue should be recognized only when (a) it has been realized or is realizable and (b) it has been earned. Transactions common to the high-technology industry that may indicate the revenue recognition criteria have not been met include—
 - Bill and hold sales.
 - Unfinished products shipped to customers.
 - Unauthorized products shipped to customers.
 - Sales or shipments to entities other than the customer.

Consideration of Fraud

Fraud Risk Factors

3.41 Among its provisions, SAS No. 82, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 316), provides categories of fraud risk factors that the auditor should consider in assessing the risk of material misstatement due to fraud. Some of these risk factors and conditions will be present in entities where the specific circumstances do not present a risk of material misstatement. Also, specific controls may exist that mitigate the risk of material misstatement due to fraud, even though risk factors or conditions are present. When identifying risk factors and other conditions, auditors should assess whether those risk factors and conditions, individually and in combination, present a risk of material misstatement of the financial statements.

3.42 Risk factors that may indicate material misstatement of revenue arising from fraudulent financial reporting in a high-technology company may be grouped in the following three categories:

- a. *Management's characteristics and influence over the control environment.* Examples include—
 - Motivations for management to engage in fraudulent financial reporting. Specific indicators might include—
 - Management's excessive interest in maintaining sales or earnings without regard to proper accounting or to the company's established revenue recognition policies.
 - Significant amounts of executive compensation tied to stock performance.
 - Excessive involvement of nonfinancial management, such as sales personnel in financial reporting.
 - A failure by management to display and communicate an appropriate attitude regarding internal control and financial reporting. Specific indicators might include—
 - Poor or no coordination between sales, accounting, and legal personnel regarding the terms of sales agreements that affect revenue recognition.
 - Lack of control over contract documentation, and insufficient review and understanding of the sales agreements by finance personnel.
 - Lack of communication throughout the organization regarding acceptable revenue recognition practices.
 - The existence of side agreements.
- b. *Industry conditions.* Examples include—
 - A highly competitive environment
 - High vulnerability to technological changes and product obsolescence
- c. *Operating characteristics and financial stability.* Examples include—
 - Significant volumes of product sold into a distribution channel without a corresponding increase in end-user demand.
 - Continuing sales to resellers coupled with a lack of enforcement of payment terms on previously outstanding balances.
 - Frequent changes in marketing or distribution methods or strategies.
 - Existence of an unusual number of contract amendments, late changes, or both.
 - Existence of nonmonetary transactions.

Responses to the Presence of Fraud Risk Factors

3.43 SAS No. 82 provides guidance on an auditor's consideration of and response to the presence of fraud risk factors. If there is a risk of material misstatement due to fraud that may involve or result in improper revenue recognition, the auditor should consider audit procedures addressing revenue recognition that will limit audit risk to an appropriate level in light of the risk

factors present. For example, the auditor may decide to alter the nature, timing, or extent of substantive procedures. Examples of specific responses might be to perform substantive analytical procedures at a detailed level by comparing sales by product or service to auditor-developed expectations. The auditor also might conduct interviews of personnel about the risk of material misstatement of revenue due to fraud to obtain staff's insights about the risk and whether or how controls address the risk. Paragraph 30 of SAS No. 82 states that it may be appropriate to confirm with customers certain relevant contract terms, including acceptance criteria, delivery, and payment terms and the absence of future or continuing vendor obligations, the right to return the product, guaranteed resale amounts, cancellation or refund provisions, and the absence of side agreements. Guidance on the use of confirmations to gather audit evidence about revenue recognition is contained in paragraphs 3.66 through 3.68 of this chapter.

Control Considerations—Obtaining an Understanding of Internal Control

3.44 SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit*, as amended by SAS No. 78 and SAS No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec 319), requires the auditor to obtain an understanding of internal control, including the extent to which information technology is used in significant accounting applications,⁷ that will enable the auditor to do all of the following.

- Identify the types of potential misstatements.
- Consider factors that affect the risk that the misstatements would be material to the financial statements.
- Design tests of controls, when applicable.
- Design substantive tests.

3.45 The auditor's understanding of internal control over revenue transactions ordinarily will include the client's policies and procedures for receiving and accepting orders, extending credit, shipping goods, relieving inventory, billing and recording sales transactions, receiving and recording sales returns, and authorizing and issuing credit memos. The understanding ordinarily will include whether the entity has procedures for determining the proper cutoff of sales at the end of the accounting period. It also is important for the auditor to have an understanding of the computer applications and key documents (for example, purchase orders, shipping reports, bills of lading, invoices, credit memos) used during the processing of revenue transactions.

3.46 The significant financial statement accounts relating to management's assertions about revenue include sales, sales returns and allowances, service revenue, accounts receivable and related allowance accounts, deferred revenues, and cash. Controls may be designed according to objectives based on the five components of internal control described in SAS No. 55, as amended. The components of internal control are the control environment, risk assessment,

⁷ Statement on Auditing Standards (SAS) No. 22, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 311.09) states: "The extent to which computer processing is used in significant accounting applications, as well as the complexity of that processing, may also influence the nature, timing, and extent of audit procedures." [Footnote omitted]

control activities, information and communication, and monitoring. Paragraphs 3.47 through 3.51 of this chapter describe examples of controls over revenue recognition that may be in place in each of these components.

Control Environment

3.47 Underlying the internal control components described in paragraph 3.46, the control environment is the most significant factor influencing the integrity of reported revenue. The control environment includes such factors as integrity and ethical values, management's philosophy and operating style, board of directors or audit committee participation, commitment to competence, and assignment of authority and responsibility. Characteristics of a high-technology company's control environment that may improve the effectiveness of controls and decrease control risk include the following.

- Written policies defining the company's revenue recognition practices should be developed and communicated to all relevant parties (that is, accounting, sales, marketing, legal, and senior management). Such policies should include—
 - A statement of when revenue is recorded and when it is not.
 - A definition of the documentation required by the company and from customers to ship products and record revenue.
 - Policies that describe how timely the documentation should be.
 - Policies for identifying and approving nonstandard transactions.
 - Policies regarding the approval of any deviations from the documented practices or any changes to the documented practices.
- A written code of conduct should be adhered to that expressly prohibits the departure from stated policies affecting revenue recognition. For example, the code of conduct should prohibit salespeople from making undocumented side agreements with customers or otherwise modifying standard contracts without proper approval.
- The board of directors and senior management should take responsible actions when intentional unauthorized departures to the policies are identified.
- The audit committee should be knowledgeable about revenue recognition accounting matters and related controls, and be composed of independent members so that it can effectively carry out its responsibilities.

Risk Assessment

3.48 An entity's risk assessment for financial reporting purposes is its identification, analysis, and management of risks that may cause misstatements of accounts involving assertions about revenue, including a consideration of how significant estimates are developed, the possibility that unauthorized transactions may be recorded, and the possibility that authorized transactions may be recorded erroneously or omitted. Characteristics of a high-technology company's risk assessment process that may improve the effectiveness of controls and decrease control risk include—

- Managing risks associated with the improper application of GAAP related to revenue recognition. For example, the entity should take steps to properly train accounting, sales, and legal personnel in the company's revenue recognition policies.

- Controls over approval of nonstandard agreements or significant modifications to agreements.
- A process to identify revenue recognition issues when the company is about to ship products for the first time, to ship newly designed products, or enter a new line of business.

Control Activities

3.49 Control activities are the policies and procedures that help ensure that management directives are carried out. Control activities that may improve the effectiveness of internal control and decrease control risk include the following:

- Standardized sales contracts for standard, recurring transactions
- For nonstandard, negotiated transactions, the early and continued involvement of accounting personnel or others with a detailed understanding of GAAP for revenue recognition
- Written policies that prohibit unauthorized side agreements between the salespeople (or other company employees) and the customer
- Proper physical control of all contracts, including any amendments, in a single customer file
- Written policies that describe how to assess when customer acceptance provisions have been satisfied
- Written policies that describe how to monitor the performance of postdelivery obligations, such as installation and training
- Written policies describing the customer credit approval process and the periodic evaluation of existing customers' credit and payment history
- Separation of sales and credit functions
- Accounting personnel timely receiving and reviewing all sales transaction documents, including the sales contract and all related transaction documentation for nonstandard transactions
- Written policies that describe shipping guidelines
- Comparing shipping or other delivery documentation to the contract
- Prompt management action concerning noncompliance with company policies with regard to contract approval and revenue recognition

Information and Communication

3.50 The information system relevant to the financial reporting objectives of revenue recognition includes the accounting system and consists of the procedures, whether automated or manual, and records established to initiate, record, process, and report transactions, as well as the processes used to prepare significant accounting estimates and disclosures, regarding assertions about revenue. Characteristics of a high-technology company's information and communication systems that may improve the effectiveness of controls and decrease control risk include the following.

- Accounting systems that maintain a history of data necessary to estimate sales returns, price protection credits, and other sales incentives liabilities
- Collection of timely, reliable data from distributors, if applicable, to estimate sales returns

- Adequate coordination and communication between sales, legal, and accounting functions regarding the terms of the arrangement between the company and its customers, especially those terms that affect revenue recognition

Monitoring

3.51 Management monitors controls to consider whether they are operating as intended and, if not, to take corrective action. Characteristics of a high-technology company's monitoring process that may improve the effectiveness of internal control and decrease control risk include the following.

- A robust management reporting process that allows management to take timely action on sales and revenue recognition related matters, including—
 - The identification of new or unusual transactions
 - The introduction of new product offerings
 - Changes to existing marketing programs or the introduction of new ones
 - The implications of customer acceptance provisions
- Management oversight of customer credit and payment issues
- Monitoring of compliance with written policies related to revenue recognition

Control Considerations—Assessing Control Risk

3.52 After obtaining an understanding of internal control, the auditor should assess control risk for the assertions related to revenue recognition.

- The auditor may assess control risk at the maximum level, that is, the greatest probability a material misstatement related to revenue recognition will not be prevented or detected on a timely basis by the entity's internal controls. An auditor will assess control risk at the maximum level because he or she believes either: (a) policies and procedures are unlikely to pertain to revenue recognition misstatements or are unlikely to be effective or (b) evaluating the effectiveness of internal control policies and procedures would be inefficient.
- The auditor may obtain evidential matter about the effectiveness of both the design and operation of a policy or procedure that supports a lower assessed level of control risk. Such evidential matter may be obtained from tests of controls planned and performed in accordance with SAS No. 55, as amended, or from procedures that were not specifically planned as tests of controls but that nevertheless provide evidential matter about the effectiveness of the design and operation of the controls. Additional guidance on performing tests of controls is also provided in the AICPA Audit Guide *Consideration of Internal Control in a Financial Statement Audit*.

3.53 The auditor's determination of whether to obtain evidential matter to support a lower assessed level of control risk, or to assess control risk at the maximum level, for assertions related to revenue recognition often is influenced by—

- *The entity's use of IT.* In entities where a significant amount of information is initiated, recorded, processed, or reported electronically, the auditor may determine that it is not practical or possible to

restrict detection risk to an acceptable level by performing only substantive tests for one or more financial statement assertions. In such circumstances, the auditor should perform tests of controls to gather evidential matter to use in assessing control risk.⁸

- *Nonroutine or complex transactions.* Software revenue arrangements are negotiated between the vendor and the customer, and this negotiation process may result in unique, nonroutine transactions. For revenue recognition related to nonroutine transactions or complex applications of GAAP, the auditor typically assesses control risk at the maximum level.
- *Unsophisticated internal controls.* Smaller computer software vendors may be characterized by unsophisticated organizational structures that lack certain pervasive controls, for example, segregation of duties. A lack of controls over revenue transactions would require the auditor to assess control risk at the maximum level and perform substantive audit procedures.

Designing Analytical Procedures

3.54 SAS No. 56, *Analytical Procedures* (AICPA, *Professional Standards*, vol. 1, AU sec. 329), requires the auditor to apply analytical procedures to some extent—

- To assist in planning the nature, timing, and extent of other auditing procedures, and
- As an overall review of the financial information in the final review stage of the audit.

Analytical procedures also may be used as substantive tests to obtain evidential matter about revenue recognition.

3.55 For high-technology manufacturing companies, analytical procedures the auditor may apply include the following.

- Review days sales outstanding (DSO) and related trends over the last several quarters.
- Segregate and analyze DSO by geography, industry, and salesperson, as appropriate, based on identified or perceived risk (for example, economic conditions in certain countries or industries, and key salespeople identified as being aggressive).
- Compare actual revenues by product line with budgeted amounts and revenues of the preceding period and consider whether results are consistent with other known information.
- Review internally used metrics or nonfinancial indicators of sales activity.
- Review gross margin trends and compare to competitor's trends.
- Compare the number of weeks of inventory in distribution channels with prior periods for unusual increases that may indicate channel stuffing.

⁸ SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit*, as amended by SAS No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319.66–68).

- Compare revenue deductions, such as discounts and returns and allowances, as a percentage of revenues with budgeted and prior period percentages and determine whether changes appear reasonable in light of other revenue information and current-year trends in the business and industry.

Designing Substantive Procedures Based on Risk Assessment

3.56 Auditors should design substantive procedures that will address the assertions made about revenue recognition—occurrence, completeness, rights, valuation, and presentation and disclosure. The objectives of the audit procedures should be developed in the light of these assertions and the specific risks of material misstatement particular to revenue recognition.

Types of Potential Misstatement

3.57 The following table lists the types of potential misstatements related to revenue recognition for high-technology companies.

<u>Potential Misstatement</u>	<u>Example</u>
<p>a. <i>Failure to identify the existence of multiple elements in the transaction</i></p>	<ul style="list-style-type: none"> ● The product contains embedded software that is <i>not</i> incidental, therefore requiring the application of SOP 97-2. ● The arrangement includes vendor obligations for more than just the product (for example, services and future products).
<p>b. <i>Inappropriate recognition of revenue related to separate elements of an arrangement or a transaction</i></p>	<ul style="list-style-type: none"> ● Undelivered elements of the arrangement are essential to the functionality of delivered elements. ● Objective evidence of fair value of undelivered elements does not exist.
<p>c. <i>For sale of product, earnings process is not complete</i></p>	<ul style="list-style-type: none"> ● The product has not been shipped. ● Title and risk of loss has not passed to the buyer. ● Installation or acceptance provisions exist. ● Buyer's payment is not probable. ● Buyer did not order the product. ● Uncertainty exists about the ultimate functionality of the product. ● Significant postsale seller obligations exist. ● Distributors do not assume the risks of ownership.

(continued)

<u>Potential Misstatement</u>	<u>Example</u>
d. <i>Revenue recognized at time of sales with right of return when management is unable to reasonably estimate future product returns</i>	<ul style="list-style-type: none"> ● Transaction includes extended payment terms that are inconsistent with the company's historical credit practices. ● Product is subject to significant obsolescence. ● Absence of relevant historical experience. ● Lack of "visibility" into distribution channels. ● Distributors are new, undercapitalized, or in financial difficulty.
e. <i>Improper accounting for service revenue</i>	<ul style="list-style-type: none"> ● Service revenue is not recognized ratably over contract period or as the service is performed. ● Failure to consider or improper application of contract accounting.
f. <i>Improper accounting for revenue from maintenance agreements and extended warranties</i>	<ul style="list-style-type: none"> ● Revenue from maintenance agreements and extended warranties is not deferred. ● Deferred revenue is improperly amortized.
g. <i>For sales to distributors, failure to account for incentives and concessions</i>	<ul style="list-style-type: none"> ● Potential price protection credits and other sales incentives are not properly accrued against current period sales.
h. <i>Improper recognition of bill and hold sales</i>	<ul style="list-style-type: none"> ● Revenue from bill and hold sales is recognized when criteria stated in AAER No. 108 have not been met.

3.58 There is not necessarily a one-to-one correspondence between substantive procedures and audit objectives—some procedures accomplish more than one objective and address several potential risks of misstatement. To reduce the risk of material misstatement of revenue, auditors should consider the substantive procedures described in paragraphs 3.59 through 3.76.

Understand Terms of Sale

3.59 The company should document the terms of its arrangements with its customers, either with a standard sales agreement for routine sales, or a legal contract for nonroutine sales. Additional documentation regarding the company's arrangements with its customers may be found in the customer correspondence files. Reading this documentation, including the contract and customer correspondence, and analyzing the terms of the arrangement will allow auditors to determine whether the revenue associated with the transaction was recognized in accordance with GAAP.

3.60 In determining which contracts and correspondence files to read and analyze, the auditor should select a sufficient number and type of transactions to reduce audit risk to an acceptable level. Auditors generally will not need to read and analyze *all* contracts and customer correspondence supporting revenue recognized during the audit period. In determining which transactions to select for analysis, the auditor should consider the following.

- a. *The materiality of the transaction.* For example, an auditor may be able to reduce audit risk to an acceptable level by analyzing all material transactions entered into during the audit period together with a selection of other transactions that, individually, were not considered material.
- b. *The date the contract was entered into.* It is not uncommon for high-technology companies to make a proportionately higher amount of sales close to the end of the reporting period. In order to reduce the risk of revenues being recorded in the wrong period, auditors should consider focusing audit attention on those transactions near the end of the period.
- c. *Contracts relating to high inherent risk transactions.* Paragraph 3.40 describes revenue transactions that typically have a higher inherent risk of material misstatement. When selecting contracts for detailed analysis, auditors should consider focusing audit attention on such transactions.

3.61 When the company uses standardized agreements, audit procedures may be limited to—

- Evaluating the standardized contract for terms that may affect revenue recognition.
- Reviewing a sample of transactions for compliance with the standardized agreement.
- Reviewing documentation, such as purchase orders, that indicate the product was desired and ordered by the customer.
- Reviewing shipping or acceptance documentation to ensure proper cut-off and revenue recognition.

3.62 When analyzing a contract and customer correspondence, the auditor should consider—

- Whether the contract was fully executed by both parties during the audit period.
- The specified delivery dates.
- All provisions that could affect the timing of revenue recognition, such as—
 - Significant postsale seller obligations.
 - Rights of return.
 - Price protection and other sales incentive programs.
 - Cancellation privileges.
 - Installation requirements and other service deliverables.⁹
 - Acceptance clauses.

3.63 High-technology companies may enter into oral or written “side agreements” to contracts that effectively modify those contracts. Some side

⁹ See paragraph 3.27.

agreements may contain terms prohibiting the customer from disclosing the existence of the side agreement to third parties. Auditors should make inquiries of those familiar with the terms of the sale (for example, sales personnel) to determine whether side agreements exist and to ensure that all terms of the agreement between the company and its customer have been considered when determining revenue recognition. To detect the existence of undisclosed side agreements, the auditor should consider the need to perform substantive procedures, such as reviewing credit memos, sales concessions, or similar marketing allowances granted in the subsequent period for adjustment or reversal of revenues previously recorded.

3.64 The company's history or management's intentions may indicate the existence of implied concessions that are not documented. For example, management may intend to provide more liberal rights of return than what the company is contractually obligated to provide. The auditor should assess the company's history and inquire about management's intentions to identify the existence of implied concessions that may affect the timing of revenue recognition.

Understand Arrangements With Distributors and VARs

3.65 The auditor should review relevant documentation and make inquiries to gain an understanding of arrangements the company has with its distributors and VARs. The auditor should consider terms of those arrangements that are relevant for revenue recognition, including—

- The presence of incentives or concessions that may affect the timing of revenue recognition, including those items listed in paragraph 3.08.
- The reliability of the information provided by the distributors and VARs, for example inventory and sales levels, that enables management to make a reasonable estimates of product returns, price protection credits, and other sales incentive liabilities.
- The economic substance of the distributor or VAR and its ability to pay and whether its distributor's financial condition indicates that the earnings process may not be complete until the distributor or VAR sells the product to the end user.

Confirm Terms of the Sale

3.66 SAS No. 67, *The Confirmation Process* (AICPA, *Professional Standards*, vol. 1, AU sec. 330), provides guidance on the use of confirmations to gather evidential matter. When the combined level of inherent risk and control risk is high, SAS No. 67 states that the auditor should consider confirming the terms of complex transactions with other parties in addition to examining documentation held by the entity. Complexity combined with high levels of inherent and control risk frequently characterize certain high-technology company sales, including—

- Nonroutine sales.
- "Solution sales" and other bundles that include products and services.
- Bill and hold sales.
- Arrangements with distributors and VARs.

3.67 The auditor's understanding of the client's arrangements and transactions with its customers is key to determining the information to be confirmed. By reading the contract and customer correspondence file and understanding the terms of the arrangements, the auditor should determine

the appropriate information to include on the confirmation request. When confirmations are used to gather evidential matter relating to revenue recognition, the auditor should consider confirming the following terms.

- Date(s) of delivery
- Pricing details
- The existence of any side agreements or oral modifications to the contract
- Unusual rights of return, acceptance or installation provisions, cancellation privileges, or warranty provisions
- Rights to future products or services
- Other pertinent contract provisions

3.68 SAS No. 67 requires the auditor to direct the confirmation request to a third party that the auditor believes is knowledgeable about the information to be confirmed. When confirming the terms of sales agreements in the high-technology industry, the customer's representative who executed the sales contract typically is most knowledgeable of its terms.

Test for Product Shipment

3.69 Revenue from product sales cannot be recognized until the product is shipped.¹⁰ Auditors should obtain evidential matter to corroborate that the product was shipped and title transferred to the buyer. To obtain evidential matter, the auditor should consider the performing the following procedures on a sample basis.

- Confirm the delivery and acceptance of the product with the customer, as described in paragraphs 3.66 through 3.68.
- Review shipping documents and packing slips to ensure the product was delivered and title transferred before the end of the reporting period and a proper accounting cutoff was achieved.
- Physically observe the appropriateness of the shipping cutoff, either in conjunction with the observation of physical inventory or as a standalone audit procedure.

Test for Collectibility

3.70 The earnings process is not considered complete unless payment from the customer is probable. For material transactions, the auditor should consider obtaining evidential matter to support creditworthiness of the customer and the related collectibility of the receivable. Subsequent cash receipts can provide evidential matter to support the collectibility of the fee.

Test Recognition of Deferred Revenue

3.71 Deferred revenue from high-technology company sales may result from the following circumstances.

- a. Terms of the sale that indicate that the earnings process is not complete, as described in paragraph 3.17 of this chapter
- b. The sale of services when the performance of the services extends over more than one accounting period.
- c. The sale of maintenance agreements or extended warranties

¹⁰ See paragraph 3.18(b).

3.72 For deferred revenue relating to the items described in 3.71a, the auditor should obtain evidential matter to support management's assertion that all deferred revenue has been recognized when the criteria for revenue recognition have been met.

3.73 Contract accounting requires the deferral of revenue and subsequent revenue recognition as the service is performed. When the services are performed over several accounting periods, management may be required to estimate the percentage of the service that has been performed to date in order to recognize revenue under contract accounting. SAS No. 57, *Auditing Accounting Estimates* (AICPA, *Professional Standards*, vol. 1, AU sec. 342), provides guidance on evaluating the reasonableness of accounting estimates made by management. In evaluating reasonableness, the auditor should focus on key factors and assumptions underlying the estimate. For estimates relating to the performance of high-technology services, the auditor should consider factors and assumptions related to the following.

- The technical complexity of the project (The more complex a project, the more difficult it may be to estimate the percentage of the work that has been performed.)
- The project maturity (The closer the service project is to completion, the more reliable the estimate of the percentage of the work performed to date.)
- The project duration and size
- The company's history of completing similar projects
- The susceptibility of the project design to change
- The company's history of revisions of estimates.

3.74 To evaluate the reasonableness of estimates relating to the performance of services, the auditor should consider the following procedures.

- Make inquiries of management, both financial and operational.
- Review detailed client analysis of hours/costs incurred and estimates to complete.
- Review data, such as time cards, to support the estimate of services performed.

3.75 For deferred revenue related to the sale of maintenance contracts and extended warranties, the auditor should understand the terms of the contracts or warranties and determine that the revenue from their sale is being amortized over the life of the agreement using the straight-line method. If the straight-line method is not being used, the auditor should obtain evidential matter to support management's assertion that the costs of performing services under the contract are incurred on other than a straight-line basis.

Allowance for Sales Returns

3.76 As described in paragraph 3.19, management is required to estimate sales returns at the time the sale of the product is made. Auditors should consider performing the following procedures as a means to obtain evidential matter to evaluate the reasonableness of management's estimate.

- Review credit memos and accounts receivable or revenue adjustments made subsequent to the end of the reporting period.
- Analyze the company's historical experience with sales returns of similar products to similar customers.

- Make inquiries regarding the presence of the factors listed in paragraph 8 of SAS No. 48 and, if applicable, the additional factors listed in paragraph 3.23 of this chapter, to determine whether the amount of returns can be reasonably estimated.
- Determine that the other criteria for revenue recognition when the right of return exists have been met.

Presentation and Disclosure

3.77 Assertions about presentation and disclosure address whether the classification, description, and disclosure of revenue in the entity's financial statements are in conformity with GAAP. The auditor should evaluate whether the presentation and disclosure of revenue are in conformity with GAAP. As noted in SAS No. 69, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles* (AICPA, *Professional Standards*, vol. 1, AU sec. 411.04), the auditor's opinion as to whether financial statements are presented in conformity with GAAP should be based on the auditor's judgment as to whether—

- a. The accounting principles selected and applied have general acceptance.
- b. The accounting principles are appropriate in the circumstances.
- c. The financial statements, including the related notes, are informative of matters that may affect their use, understanding, and interpretation.
- d. The information presented in the financial statements is classified and summarized in a reasonable manner, that is, neither too detailed nor too condensed.
- e. The financial statements reflect the underlying transactions and events in a manner that presents the financial position, results of operations, and cash flows stated within a range of acceptable limits, that is, limits that are reasonable and practicable to attain in financial statements.

3.78 Marketing arrangements may vary among distributors and value-added resellers. For example, some distributors may not take title to the product sold to the customer and have no risk of loss or other responsibility for the product. In those situations a question may arise as to whether revenue from the sale of the product should be reported "gross" with a separate display of cost of sales to arrive at gross profit or whether the margin on the sale should be reported "net," similar to a commission. EITF Issue No. 99-19, *Reporting Revenue Gross as a Principal versus Net as an Agent*, states that whether a company should recognize revenue based on (a) the gross amount billed to a customer because it has earned revenue from the sale of the goods or services or (b) the net amount retained (that is, the amount billed to the customer less the amount paid to a supplier) because it has earned a commission or fee is a matter of judgment that depends on the relevant facts and circumstances. EITF Issue No. 99-19 sets forth factors or indicators to consider in making the evaluation.

3.79 Regulation S-X requires SEC registrants to disclose separately, on the face of the income statement, revenue from the sales of products, services, and other products. In addition, the interpretative response to Question 1 in section B of SAB No. 101 states that the SEC staff believes that costs related to each type of revenue similarly should be reported separately on the face of the income statement.

3.80 With respect to disclosure, paragraph 12 of Accounting Principles Board (APB) Opinion No. 22, *Disclosure of Accounting Policies*, states:

In general, the disclosure should encompass important judgments as to appropriateness of principles relating to recognition of revenue and allocation of asset costs to current and future periods; in particular it should encompass those accounting principles and methods that involve any of the following:

- a. A selection from existing acceptable alternatives;
- b. Principles and methods peculiar to the industry in which the reporting entity operates, even if such principles and methods are predominantly followed in that industry;
- c. Unusual or innovative applications of generally accepted accounting principles (and, as applicable, of principles and methods peculiar to the industry in which the reporting entity operates).

3.81 Accordingly, high-technology manufacturers should consider disclosing their accounting policies concerning—

- Revenue recognition for each significant type of revenue (for example, product sales, installation and other services, and barter transactions).
- Accounting for discounts, incentives and sales returns, and, if applicable, the methods used to develop estimates of significant sales allowances.
- Recognition of deferred revenues.

3.82 SAS No. 32, *Adequacy of Disclosure in Financial Statements* (AICPA, *Professional Standards*, vol. 1, AU sec. 431), requires the auditor to express a qualified or an adverse opinion if management omits from the financial statements, including the accompanying notes, information that is required by GAAP. The auditor should review the financial statements to determine whether disclosures are adequate with regard to such matters as revenue recognition policies, information about major customers or significant concentrations of credit risk, related-party transactions, and the effect of significant revisions to estimates in percentage-of-completion contracts.

Written Representations From Management

3.83 SAS No. 85, *Management Representations*, as amended by SAS No. 89, *Audit Adjustments* (AICPA, *Professional Standards*, vol. 1, AU sec. 333), requires the auditor to obtain written representations from management and provides guidance concerning the representations to be obtained. Such representations are part of the evidential matter the auditor obtains but are not a substitute for the application of auditing procedures. Paragraph 7 of SAS No. 85 states that the representation letter ordinarily should be tailored to include appropriate representations from management relating to matters specific to the entity's business or industry. Representations specific to high-technology revenue transactions may include the following.

- The company has provided all relevant agreements, correspondence, and documentation regarding revenue transactions. There are no additional written or oral side agreements.
- Management intends not to provide refunds or concessions that are not required under the provisions of the arrangement.
- Provisions have been made for the fulfillment or inability to fulfill any sales commitments.

3.84 SAS No. 85, as amended, states that the management representation letter should be signed by those members of management with overall responsibility for financial and operating matters whom the auditor believes are responsible for and knowledgeable about, directly or through others in the organization, the matters covered by the representations. SAS No. 85 also states that in certain circumstances, the auditor may want to obtain written representations from other individuals. For entities in the high-technology manufacturing industry, the auditor should consider obtaining additional representations relating to revenue assertions directly from operating management, such as sales personnel.

Appendix

Resources

Financial Accounting Standards Board

Web Site

www.fasb.org

Statements of Financial Accounting Standards¹

FASB Statement No. 5, *Accounting for Contingencies* (FASB, *Current Text*, vol. 1, sec. C59)

FASB Statement No. 13, *Accounting for Leases* (FASB, *Current Text*, vol. 2, sec. L10)

FASB Statement No. 45, *Accounting for Franchise Fee Revenue* (FASB, *Current Text*, vol. 2, sec. Fr3)

FASB Statement No. 48, *Revenue Recognition When Right of Return Exists* (FASB, *Current Text*, vol. 1, sec. R75)

FASB Statement No. 49, *Accounting for Product Financing Arrangements* (FASB, *Current Text*, vol. 1, sec. D18)

FASB Statement No. 50, *Financial Reporting in the Record and Music Industry* (FASB, *Current Text*, vol. 2, sec. Re4)

FASB Statement No. 51, *Financial Reporting by Cable Television Companies* (FASB, *Current Text*, vol. 2, sec. Ca4)

FASB Statement No. 57, *Related Party Disclosures* (FASB, *Current Text*, vol. 1, sec. R36)

FASB Statement No. 66, *Accounting for Sales of Real Estate* (FASB, *Current Text*, vol. 1, sec. R10)

FASB Statement No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed* (FASB, *Current Text*, vol. 2, sec. Co2)

Technical Bulletins

FASB Technical Bulletin No. 90-1, *Accounting for Separately Priced Extended Warranty and Product Maintenance Contracts* (FASB, *Current Text*, vol. 1, sec. R75)

¹ This Guide does not include guidance related to financial instruments, such as Financial Accounting Standards Board Statement No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities*, and related Emerging Issues Task Force Issues.

Statements of Financial Accounting Concepts

FASB Concepts Statement No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*, (FASB, *Original Pronouncements*, vol. 2)

FASB Concepts Statement No. 6, *Elements of Financial Statements* (FASB, *Original Pronouncements*, vol. 2)

Emerging Issues Task Force Abstracts

EITF Issue No. 84-15, *Grantor Trusts Consolidation*

EITF Issue No. 84-17, *Profit Recognition on Sales of Real Estate with Graduated Payment Mortgages or Insured Mortgages*

EITF Issue No. 84-37, *Sale-Leaseback Transaction with Repurchase Option*

EITF Issue No. 85-24, *Distribution Fees by Distributors of Mutual Funds That Do Not Have a Front-End Sales Charge*

EITF Issue No. 85-27, *Recognition of Receipts from Made-Up Rental Shortfalls*

EITF Issue No. 86-6, *Antispeculation Clauses in Real Estate Sales Contracts*

EITF Issue No. 86-7, *Recognition by Homebuilders of Profit from Sales of Land and Related Construction Contracts*

EITF Issue No. 86-17, *Deferred Profit on Sale-Leaseback Transaction with Lessee Guarantee of Residual Value*

EITF Issue No. 86-29, *Nonmonetary Transactions: Magnitude of Boot and the Exceptions to the Use of Fair Value*

EITF Issue No. 87-9, *Profit Recognition on Sales of Real Estate with Insured Mortgages or Surety Bonds*

EITF Issue No. 87-10, *Revenue Recognition by Television "Barter" Syndicators*

EITF Issue No. 88-12, *Transfer of Ownership Interest as Part of Down Payment Under FASB Statement No. 66*

EITF Issue No. 88-14, *Settlement of Fees with Extra Units to a General Partner in a Master Limited Partnership*

EITF Issue No. 88-18, *Sales of Future Revenues*

EITF Issue No. 88-24, *Effect of Various Forms of Financing under FASB Statement No. 66*

EITF Issue No. 89-7, *Exchange of Assets or Interest in a Subsidiary for a Noncontrolling Equity Interest in a New Entity*

EITF Issue No. 91-6, *Revenue Recognition of Long-Term Power Sales Contracts*

EITF Issue No. 91-9, *Revenue and Expense Recognition for Freight Services in Process*

EITF Issue No. 93-11, *Accounting for Barter Transactions Involving Barter Credits*

EITF Issue No. 95-1, *Revenue Recognition on Sales with a Guaranteed Minimum Resale Value*

EITF Issue No. 95-4, *Revenue Recognition on Equipment Sold and Subsequently Repurchased Subject to an Operating Lease*

EITF Issue No. 96-17, *Revenue Recognition under Long-Term Power Sales Contracts That Contain both Fixed and Variable Pricing Terms*

EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*

EITF Issue No. 99-5, *Accounting for Pre-Production Costs Related to Long-Term Supply Arrangements*

EITF Issue No. 99-17, *Accounting for Advertising Barter Transactions*

EITF Issue No. 99-19, *Reporting Revenue Gross as a Principal versus Net as an Agent*

EITF Issue No. 00-3, *Application of AICPA Statement of Position 97-2, Software Revenue Recognition, to Arrangements that Include the Right to Use Software Stored on Another Entity's Hardware*

EITF Issue No. 00-5, *Determining Whether a Nonmonetary Transaction Is an Exchange of Similar Productive Assets*

EITF Issue No. 00-8, *Accounting by a Grantee for an Equity Instrument to Be Received in Conjunction with Providing Goods or Services*

EITF Issue No. 00-10, *Accounting for Shipping and Handling Fees and Costs*

EITF Issue No. 00-14, *Accounting for Certain Sales Incentives*

EITF Issue No. 00-22, *Accounting for "Points" and Certain Other Time-Based or Volume-Based Sales Incentive Offers, and Offers for Free Products or Services to Be Delivered in the Future*

EITF Issue No. 00-25, *Vendor Income Statement Characterization of Consideration Paid to a Reseller of the Vendor's Products*

Pending EITF Abstracts

EITF Issue No. 00-21, *Accounting for Revenue Arrangements with Multiple Deliverables*

EITF Issue No. 00-24, *Revenue Recognition: Sales Arrangements That Include Specified-Price Trade-In Rights*

Other

Accounting Principles Board Opinion No. 10, *Omnibus Opinion—1966* (FASB, *Current Text*, vol. 1, sec. R75)

Accounting Principles Board Opinion No. 21, *Interest on Receivables and Payables* (FASB *Original Pronouncements*, vol. 3)

Accounting Principles Board Opinion No. 22, *Disclosure of Accounting Policies* (FASB, *Current Text*, vol. 1, sec. A10)

Accounting Principles Board Opinion No. 29, *Accounting for Nonmonetary Transactions*, (FASB, *Current Text*, vol. 1, sec. N35)

Accounting Research Bulletin No. 43, *Restatement and Revision of Accounting Research Bulletins* (FASB, *Current Text*, vol. 1, sec. R75)

Accounting Research Bulletin No. 45, *Long-Term Construction-Type Contracts* (FASB, *Current Text*, vol. 2, sec. Co4)

FASB Invitation to Comment, *Accounting for Certain Service Transactions*, 1978

American Institute of Certified Public Accountants

Web Site

www.aicpa.org

Statements on Auditing Standards

SAS No. 1, *Codification of Auditing Standards and Procedures*, “Due Professional Care in the Performance of Work” (AICPA, *Professional Standards*, vol. 1, AU sec. 230)

SAS No. 22, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 311)

SAS No. 31, *Evidential Matter* (AICPA, *Professional Standards*, vol. 1, AU sec. 326)

SAS No. 32, *Adequacy of Disclosure in Financial Statements* (AICPA, *Professional Standards*, vol. 1, AU sec. 431)

SAS No. 45, *Omnibus Statement on Auditing Standards—1983*, “Related Parties” (AICPA, *Professional Standards*, vol. 1, AU sec. 334)

SAS No. 47, *Audit Risk and Materiality in Conducting an Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 312)

SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319)

SAS No. 56, *Analytical Procedures* (AICPA, *Professional Standards*, vol. 1, AU sec. 329)

SAS No. 57, *Auditing Accounting Estimates* (AICPA, *Professional Standards*, vol. 1, AU sec. 342)

SAS No. 67, *The Confirmation Process* (AICPA, *Professional Standards*, vol. 1, AU sec. 330)

SAS No. 69, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles* (AICPA, *Professional Standards*, vol. 1, AU sec. 411)

SAS No. 73, *Using the Work of a Specialist* (AICPA, *Professional Standards*, vol. 1, AU sec. 336)

SAS No. 78, *Consideration of Internal Control in a Financial Statement Audit: An Amendment to Statement on Auditing Standards No. 55* (AICPA, *Professional Standards*, vol. 1, AU sec. 319)

SAS No. 82, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 316)

SAS No. 85, *Management Representations* (AICPA, *Professional Standards*, vol. 1, AU sec. 333)

SAS No. 89, *Audit Adjustments* (AICPA, *Professional Standards*, vol. 1, AU secs. 310, 333, and 380)

SAS No. 90, *Audit Committee Communications* (AICPA, *Professional Standards*, vol. 1, AU secs. 380 and 722)

SAS No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319)

Statements of Position

Auditing Property and Liability Reinsurance (unnumbered, issued October 1982)

Auditing Life Reinsurance (unnumbered, issued November 1984)

SOP 75-2, *Accounting Practices of Real Estate Investment Trusts*

SOP 78-9, *Accounting for Investments in Real Estate Ventures*

SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*

SOP 85-3, *Accounting by Agricultural Producers and Agricultural Cooperatives*

SOP 90-3, *Definition of the Term Substantially the Same for Holders of Debt Instruments, as Used in Certain Audit Guides and a Statement of Position*

SOP 92-1, *Accounting for Real Estate Syndication Income*

SOP 92-5, *Accounting for Foreign Property and Liability Reinsurance*

SOP 93-1, *Financial Accounting and Reporting for High-Yield Debt Securities by Investment Companies*

SOP 95-1, *Accounting for Certain Insurance Activities of Mutual Life Insurance Enterprises*

SOP 97-2, *Software Revenue Recognition*

SOP 98-4, *Deferral of the Effective Date of a Provision of SOP 97-2, Software Revenue Recognition*

SOP 98-9, *Modification of SOP 97-2, Software Revenue Recognition, With Respect to Certain Transactions*

SOP 00-1, *Auditing Health Care Third-Party Revenues and Related Receivables*

SOP 00-2, *Accounting by Producers or Distributors of Films*

Technical Practice Aids

Technical Practice Aids are nonauthoritative guidance in a question-and-answer format. The TPAs on software revenue recognition are being developed by AICPA staff in conjunction with industry experts, and are posted on the AICPA Web site as they are released.

TPA 5100.38, "Subsequent Event Related to Vendor-Specific Objective Evidence for Software Revenue Recognition"

TPA 5100.39, "Software Revenue Recognition for Multiple-Element Arrangements"

TPA 5100.40, "Software Revenue Recognition Related to Year 2000 Compliant Software"

TPA 5100.41, "Effect of Prepayments on Software Revenue Recognition"

TPA 5100.42, "Extended Payment Terms and Software Revenue Recognition"

TPA 5100.43, "Corrections of Errors in Computer Software (Bug Fixes)"

TPA 5100.44, "Postcontract Customer Support During the Deployment Phase of Computer Software"

TPA 5100.45, "Effect of Change in License Mix on Software Revenue Recognition"

TPA 5100.46, "Nonmonetary Exchanges of Software (Part I)"

TPA 5100.47, "Nonmonetary Exchanges of Software (Part II)"

TPA 5100.48, "Application of Contract Accounting in Software Arrangements (Part I)"

TPA 5100.49, "Application of Contract Accounting in Software Arrangements (Part II)"

TPA 5100.50, "Definition of More-Than-Insignificant Discount and Software Revenue Recognition"

TPA 5100.51, "Accounting for Significant Incremental Discounts in Software Revenue Recognition"

TPA 5100.52, "Fair Value of PCS in a Perpetual License and Software Revenue Recognition" *

TPA 5100.53, "Fair Value of PCS in a Short-Term Time-Based License and Software Revenue Recognition"

TPA 5100.54, "Fair Value of PCS in a Multi-Year Time-Based License and Software Revenue Recognition"

TPA 5100.55, "Fair Value of PCS With a Consistent Renewal Percentage (but Varying Renewal Dollar Amounts) and Software Revenue Recognition"

TPA 5100.56, "Concessions and Software Revenue Recognition"

TPA 5100.57, "Overcoming Presumption of Concessions in Extended Payment Term Arrangements and Software Revenue Recognition"

TPA 5100.58, "Effect of Prepayments on Software Revenue Recognition (Part II)"

TPA 5100.59, "Subsequent Cash Receipt in an Extended Payment Term Arrangement for Software Revenue Recognition"

TPA 5100.60, "Customer Financing With No Software Vendor Participation and Software Revenue Recognition"

TPA 5100.61, "Effect of Prepayments on Software Revenue Recognition When Vendor Participates in Customer Financing"

TPA 5100.62, "Indicators of Incremental Risk and Their Effect on the Evaluation of Whether a Fee is Fixed or Determinable and Software Revenue Recognition"

TPA 5100.63, "Overcoming the Presumption That a Fee is Not Fixed or Determinable When Vendor Participates in Customer Financing and Software Revenue Recognition"

TPA 5100.64, "Indicators of Vendor Participation in Customer Financing That Do Not Result in Incremental Risk and Software Revenue Recognition"

TPA 5100.65, "Software Vendor Interest Rate Buy Downs on Customer Financing and Software Revenue Recognition"

TPA 5100.66, "Consideration of Other TPAs on Customer Borrowing When Customer Is a Reseller and Software Revenue Recognition"

TPA 5100.67, "Customer Acceptance and Software Revenue Recognition"

TPA 5100.68, "Fair Value of PCS in Perpetual and Multi-Year Time-Based Licenses and Software Revenue Recognition"

TPA 5100.69, "Delivery Terms and Software Revenue Recognition"

Practice Bulletins

Practice Bulletin No. 5, *Income Recognition on Loans to Financially Troubled Countries*

Practice Bulletin No. 6, *Amortization of Discounts on Certain Acquired Loans*

Audit and Accounting Guides

Analytical Procedures

Audit Sampling

Agricultural Producers and Cooperatives

Airlines

Banks and Savings Institutions

Brokers and Dealers in Securities

Casinos

Consideration of Internal Control in a Financial Statement Audit

Construction Contractors

Entities with Oil and Gas Producing Activities

Finance Companies

Health Care Organizations

Investment Companies

Life and Health Insurance Companies

Property and Liability Insurance Companies

Auditing Practice Releases

Audits of Inventories

Confirmation of Accounts Receivable

The Information Technology Age: Evidential Matter in the Electronic Environment

Audit Risk Alerts 2000/01

General Audit Risk Alert

Auto Dealerships Industry Developments

Construction Contractors Industry Developments

Lending and Depository Institutions Industry Developments

E-Business Industry Developments

Health Care Organizations Industry Developments

High-Technology Industry Developments

Insurance Industry Developments

Investment Companies Industry Developments

Real Estate Industry Developments

Retail Enterprises Industry Developments

Securities Industry Developments

The ABCs of Independence

Practice Alerts

These are published by the Professional Issues Task Force of the SEC Practice Section and are available on the AICPA Web site.

Practice Alert 00-3, *Auditing Construction Contracts*

Practice Alert 00-2, *Members in Public Accounting Firms*

Practice Alert 98-3, *Revenue Recognition Issues*

Practice Alert 98-2, *Professional Skepticism and Related Topics*

Practice Alert 98-1, *The Auditor's Use of Analytical Procedures*

Practice Alert 95-3, *Auditing Related Parties and Related-Party Transactions*

Other

Fraud-Related SEC Enforcement Actions Against Auditors: 1987-1997. New York: AICPA, 2000.

Public Oversight Board of the SEC Practice Section. *In the Public Interest: Issues Confronting the Accounting Profession*. New York: AICPA, 1993.

Public Oversight Board of the SEC Practice Section. *The Panel on Audit Effectiveness Report and Recommendations* (2000).

Ramos, Michael, *Considering Fraud in a Financial Statement Audit: Practical Guidance for Applying SAS No. 82*. New York: AICPA, 1997.

_____, *Auditing Estimates and Other Soft Accounting Information*. New York: AICPA, 1998.

Report to the Public Oversight Board of the SEC Practice Section From the Advisory Panel on Auditor Independence. *Strengthening the Professionalism of the Independent Auditor*. New York: AICPA, 1994.

Securities and Exchange Commission

(Note: While SEC Accounting and Auditing Enforcement Releases and Staff Accounting Bulletins are directed specifically to transactions of public companies, management and auditors of nonpublic companies may find the guidance therein helpful in analyzing revenue recognition matters.)

Web site

www.sec.gov

SEC Accounting and Auditing Enforcement Release No. 108, in *Federal Securities Law Reports*. Chicago: Commerce Clearing House, Inc. (looseleaf)

SEC Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition In Financial Statements*

SEC SAB No. 101: *Revenue Recognition in Financial Statements—Frequently Asked Questions and Answers*

Speech by R. Scott Blackley, Professional Accounting Fellow, Office of the Chief Accountant of the SEC, at the 28th Annual National Conference on Current SEC Developments, December 2000.

Speech by Eric G. Jacobsen, Professional Accounting Fellow, Office of the Chief Accountant of the SEC, at the 28th Annual National Conference on Current SEC Developments, December 2000.

Speech by Scott A. Taub, Professional Accounting Fellow, Office of the Chief Accountant of the SEC, at the 27th Annual National AICPA Conference on Current SEC Developments, December 1999.

Speech by Scott A. Taub, Professional Accounting Fellow, Office of the Chief Accountant of the SEC, at the 28th Annual National Conference on Current SEC Developments, December 2000.

Other Publications

Fraudulent Financial Reporting: 1987-1997, An Analysis of U.S. Public Companies. COSO (Committee of Sponsoring Organizations of the Treadway Commission), 1999.

Internal Control—Integrated Framework. COSO (Committee of Sponsoring Organizations of the Treadway Commission), 1991.

Report of the National Commission on Fraudulent Financial Reporting. National Commission on Fraudulent Financial Reporting, 1987.

Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees. Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees, 1999.

For additional copies of the *Auditing Revenue in Certain Industries Audit Guide* or to automatically receive an annual update — immediately upon its release — call 1-888-777-7077 or log on to www.cpa2biz.com.

Additional Auditing Revenue in Certain Industries Publications

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 - *Construction Contractors (012098CV)*
 - *Audits of Employee Benefit Plans (012341CV)*
 - *Audits of Entities With Oil and Gas Producing Activities (012108CV)*
 - *Federal Government Contractors (012443CV)*
 - *Health Care Organizations (012442CV)*
 - *Audits of Investment Companies (012365CV)*
 - *Life & Health Insurance Entities (012501CV)*
 - *Not-for-Profit Organizations (013394CV)*
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- *Auditing Derivative Instruments, Hedging Activities, and Investments in Securities (2001) (012520CV)*
- *Auditing Revenue in Certain Industries (2001) (012510CV)*
- *Consideration of Internal Control in a Financial Statement Audit (1996) (012451CV)*
- *Personal Financial Statements (2001) (011138CV)*
- *Prospective Financial Information (1999) (011179CV)*
- *Use of Real Estate Appraisal Information (1997) (013159CV)*

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