

## AU Section 329

# Analytical Procedures

(Supersedes section 318.)

Source: SAS No. 56; SAS No. 96.

**Effective for audits of financial statements for periods beginning on or after January 1, 1989, unless otherwise indicated.**

**.01** This section provides guidance on the use of analytical procedures and requires the use of analytical procedures in the planning and overall review stages of all audits.

**.02** Analytical procedures are an important part of the audit process and consist of evaluations of financial information made by a study of plausible relationships among both financial and nonfinancial data. Analytical procedures range from simple comparisons to the use of complex models involving many relationships and elements of data. A basic premise underlying the application of analytical procedures is that plausible relationships among data may reasonably be expected to exist and continue in the absence of known conditions to the contrary. Particular conditions that can cause variations in these relationships include, for example, specific unusual transactions or events, accounting changes, business changes, random fluctuations, or misstatements.

**.03** Understanding financial relationships is essential in planning and evaluating the results of analytical procedures, and generally requires knowledge of the client and the industry or industries in which the client operates. An understanding of the purposes of analytical procedures and the limitations of those procedures is also important. Accordingly, the identification of the relationships and types of data used, as well as conclusions reached when recorded amounts are compared to expectations, requires judgment by the auditor.

**.04** Analytical procedures are used for the following purposes:

- a. To assist the auditor in planning the nature, timing, and extent of other auditing procedures
- b. As a substantive test to obtain audit evidence about particular assertions related to account balances or classes of transactions
- c. As an overall review of the financial information in the final review stage of the audit

Analytical procedures should be applied to some extent for the purposes referred to in (a) and (c) above for all audits of financial statements made in accordance with generally accepted auditing standards. In addition, in some cases, analytical procedures can be more effective or efficient than tests of details for achieving particular substantive testing objectives. [Revised, March, 2006, to reflect conforming changes necessary due to the issuance of Statement on Auditing Standards No. 105.]

**.05** Analytical procedures involve comparisons of recorded amounts, or ratios developed from recorded amounts, to expectations developed by the auditor. The auditor develops such expectations by identifying and using plausible

relationships that are reasonably expected to exist based on the auditor's understanding of the client and of the industry in which the client operates. Following are examples of sources of information for developing expectations:

- a. Financial information for comparable prior period(s) giving consideration to known changes
- b. Anticipated results—for example, budgets, or forecasts including extrapolations from interim or annual data
- c. Relationships among elements of financial information within the period
- d. Information regarding the industry in which the client operates—for example, gross margin information
- e. Relationships of financial information with relevant nonfinancial information

## Analytical Procedures in Planning the Audit

**.06** The purpose of applying analytical procedures in planning the audit is to assist in planning the nature, timing, and extent of auditing procedures that will be used to obtain audit evidence for specific account balances or classes of transactions. To accomplish this, the analytical procedures used in planning the audit should focus on (a) enhancing the auditor's understanding of the client's business and the transactions and events that have occurred since the last audit date, and (b) identifying areas that may represent specific risks relevant to the audit. Thus, the objective of the procedures is to identify such things 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. [Revised, March, 2006, to reflect conforming changes necessary due to the issuance of Statement on Auditing Standards No. 105.]

**.07** Analytical procedures used in planning the audit generally use data aggregated at a high level. Furthermore, the sophistication, extent and timing of the procedures, which are based on the auditor's judgment, may vary widely depending on the size and complexity of the client. For some entities, the procedures may consist of reviewing changes in account balances from the prior to the current year using the general ledger or the auditor's preliminary or unadjusted working trial balance. In contrast, for other entities, the procedures might involve an extensive analysis of quarterly financial statements. In both cases, the analytical procedures, combined with the auditor's knowledge of the business, serve as a basis for additional inquiries and effective planning.

**.08** Although analytical procedures used in planning the audit often use only financial data, sometimes relevant nonfinancial information is considered as well. For example, number of employees, square footage of selling space, volume of goods produced, and similar information may contribute to accomplishing the purpose of the procedures.

## Analytical Procedures Used as Substantive Tests

**.09** The auditor's reliance on substantive tests to achieve an audit objective related to a particular assertion<sup>1</sup> may be derived from tests of details, from

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<sup>1</sup> Assertions are representations by management that are embodied in financial statement components. See section 326, *Audit Evidence*. [Revised, March 2006, to reflect conforming changes necessary due to the issuance of Statement on Auditing Standards No. 106.]

analytical procedures, or from a combination of both. The decision about which procedure or procedures to use to achieve a particular audit objective is based on the auditor's judgment on the expected effectiveness and efficiency of the available procedures.

**.10** The auditor considers the level of assurance, if any, he wants from substantive testing for a particular audit objective and decides, among other things, which procedure, or combination of procedures, can provide that level of assurance. For some assertions, analytical procedures are effective in providing the appropriate level of assurance. For other assertions, however, analytical procedures may not be as effective or efficient as tests of details in providing the desired level of assurance.

**.11** The expected effectiveness and efficiency of an analytical procedure in identifying potential misstatements depends on, among other things, (a) the nature of the assertion, (b) the plausibility and predictability of the relationship, (c) the availability and reliability of the data used to develop the expectation, and (d) the precision of the expectation.

## Nature of Assertion

**.12** Analytical procedures may be effective and efficient tests for assertions in which potential misstatements would not be apparent from an examination of the detailed evidence or in which detailed evidence is not readily available. For example, comparisons of aggregate salaries paid with the number of personnel may indicate unauthorized payments that may not be apparent from testing individual transactions. Differences from expected relationships may also indicate potential omissions when independent evidence that an individual transaction should have been recorded may not be readily available.

## Plausibility and Predictability of the Relationship

**.13** It is important for the auditor to understand the reasons that make relationships plausible because data sometimes appear to be related when they are not, which could lead the auditor to erroneous conclusions. In addition, the presence of an unexpected relationship can provide important evidence when appropriately scrutinized.

**.14** As higher levels of assurance are desired from analytical procedures, more predictable relationships are required to develop the expectation. Relationships in a stable environment are usually more predictable than relationships in a dynamic or unstable environment. Relationships involving income statement accounts tend to be more predictable than relationships involving only balance sheet accounts since income statement accounts represent transactions over a period of time, whereas balance sheet accounts represent amounts as of a point in time. Relationships involving transactions subject to management discretion are sometimes less predictable. For example, management may elect to incur maintenance expense rather than replace plant and equipment, or they may delay advertising expenditures.

## Availability and Reliability of Data

**.15** Data may or may not be readily available to develop expectations for some assertions. For example, to test the completeness assertion, expected sales for some entities might be developed from production statistics or square feet of selling space. For other entities, data relevant to the assertion of completeness of sales may not be readily available, and it may be more effective or efficient to use the details of shipping records to test that assertion.

**.16** The auditor obtains assurance from analytical procedures based upon the consistency of the recorded amounts with expectations developed from data derived from other sources. The reliability of the data used to develop the expectations should be appropriate for the desired level of assurance from the analytical procedure. The auditor should assess the reliability of the data by considering the source of the data and the conditions under which it was gathered, as well as other knowledge the auditor may have about the data. The following factors influence the auditor's consideration of the reliability of data for purposes of achieving audit objectives:

- Whether the data was obtained from independent sources outside the entity or from sources within the entity
- Whether sources within the entity were independent of those who are responsible for the amount being audited
- Whether the data was developed under a reliable system with adequate controls
- Whether the data was subjected to audit testing in the current or prior year
- Whether the expectations were developed using data from a variety of sources

### **Precision of the Expectation**

**.17** 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 (see paragraph .20). As expectations become more precise, the range of expected differences becomes narrower and, accordingly, the likelihood increases that significant differences from the expectations are due to misstatements. The precision of the expectation depends on, among other things, the auditor's identification and consideration of factors that significantly affect the amount being audited and the level of detail of data used to develop the expectation.

**.18** Many factors can influence financial relationships. For example, sales are affected by prices, volume and product mix. Each of these, in turn, may be affected by a number of factors, and offsetting factors can obscure misstatements. More effective identification of factors that significantly affect the relationship is generally needed as the desired level of assurance from analytical procedures increases.

**.19** Expectations developed at a detailed level generally have a greater chance of detecting misstatement of a given amount than do broad comparisons. Monthly amounts will generally be more effective than annual amounts and comparisons by location or line of business usually will be more effective than company-wide comparisons. The level of detail that is appropriate will be influenced by the nature of the client, its size and its complexity. Generally, the risk that material misstatement could be obscured by offsetting factors increases as a client's operations become more complex and more diversified. Disaggregation helps reduce this risk.

### **Investigation and Evaluation of Significant Differences**

**.20** In planning the analytical procedures as a substantive test, the auditor should consider the amount of difference from the expectation that can be accepted without further investigation. This consideration is influenced

primarily by materiality and should be consistent with the level of assurance desired from the procedures. Determination of this amount involves considering the possibility that a combination of misstatements in the specific account balances, or class of transactions, or other balances or classes could aggregate to an unacceptable amount.<sup>2</sup>

**.21** The auditor should evaluate significant unexpected differences. Reconsidering the methods and factors used in developing the expectation and inquiry of management may assist the auditor in this regard. Management responses, however, should ordinarily be corroborated with other audit evidence. In those cases when an explanation for the difference cannot be obtained, the auditor should obtain sufficient appropriate audit evidence about the assertion by performing other audit procedures to satisfy himself as to whether the difference is a likely misstatement.<sup>3</sup> In designing such other procedures, the auditor should consider that unexplained differences may indicate an increased risk of material misstatement. (See section 316, *Consideration of Fraud in a Financial Statement Audit*.) [Revised, March, 2006, to reflect conforming changes necessary due to the issuance of Statement on Auditing Standards No. 105.]

## Documentation of Substantive Analytical Procedures

**.22** When an analytical procedure is used as the principal substantive test of a significant financial statement assertion, the auditor should document all of the following:

- a. The expectation, where that expectation is not otherwise readily determinable from the documentation of the work performed, and factors considered in its development
- b. Results of the comparison of the expectation to the recorded amounts or ratios developed from recorded amounts
- c. Any additional auditing procedures performed in response to significant unexpected differences arising from the analytical procedure and the results of such additional procedures

[Paragraph added, effective for audits of financial statements for periods beginning on or after May 15, 2002, by Statement on Auditing Standards No. 96.]

## Analytical Procedures Used in the Overall Review

**.23** The objective of analytical procedures used in the overall review stage of the audit is to assist the auditor in assessing the conclusions reached and in the evaluation of the overall financial statement presentation. A wide variety of analytical procedures may be useful for this purpose. The overall review would generally include reading the financial statements and notes and considering (a) the adequacy of evidence gathered in response to unusual or unexpected balances identified in planning the audit or in the course of the audit and (b) unusual or unexpected balances or relationships that were not previously identified. Results of an overall review may indicate that additional evidence may be needed. [Paragraph renumbered by the issuance of Statement on Auditing Standards No. 96, January 2002.]

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<sup>2</sup> See section 312, *Audit Risk and Materiality in Conducting an Audit*, paragraphs .24 through .26.

<sup>3</sup> See section 312.35.

## Effective Date

**.24** This section is effective for audits of financial statements for periods beginning on or after January 1, 1989. Early application of the provisions of this section is permissible. [Paragraph renumbered by the issuance of Statement on Auditing Standards No. 96, January 2002.]

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