INTERNATIONAL STANDARD ON AUDITING 520
ANALYTICAL PROCEDURES

(Effective for audits of financial statements for periods beginning on or after December 15, 2009)

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International Standard on Auditing (ISA) 520, "Analytical Procedures" should be read in conjunction with ISA 200, "Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing."

Introduction

Scope of this ISA

1. This International Standard on Auditing (ISA) deals with the auditor's use of analytical procedures as substantive procedures ("substantive analytical procedures"). It also deals with the auditor's responsibility to perform analytical procedures near the end of the audit that assist the auditor when forming an overall conclusion on the financial statements. ISA 315[1] deals with the use of analytical procedures as risk assessment procedures. ISA 330 includes requirements and guidance regarding the nature, timing and extent of audit procedures in response to assessed risks; these audit procedures may include substantive analytical procedures.[2]

Effective Date

2. This ISA is effective for audits of financial statements for periods beginning on or after December 15, 2009.

Objectives

3. The objectives of the auditor are:

   (a) To obtain relevant and reliable audit evidence when using substantive analytical procedures; and

   (b) To design and perform analytical procedures near the end of the audit that assist the auditor when forming an overall conclusion as to whether the financial statements are consistent with the auditor's understanding of the entity.

Definition

4. For the purposes of the ISAs, the term "analytical procedures" means evaluations of financial information through analysis of plausible relationships among both financial and non-financial data. Analytical procedures also encompass such investigation as is necessary of identified fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount. (Ref: Para. A1-A3)

Requirements

Substantive Analytical Procedures

5. When designing and performing substantive analytical procedures, either alone or in combination with tests of details, as substantive procedures in

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1 ISA 315, "Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment," paragraph 6(b).

2 ISA 330, "The Auditor's Reponses to Assessed Risks," paragraphs 6 and 18.

accordance with ISA 330,[3] the auditor shall: (Ref: Para. A4-A5)

(a) Determine the suitability of particular substantive analytical procedures for given assertions, taking account of the assessed risks of material misstatement and tests of details, if any, for these assertions; (Ref: Para. A6-A11)

(b) Evaluate the reliability of data from which the auditor's expectation of recorded amounts or ratios is developed, taking account of source, comparability, and nature and relevance of information available, and controls over preparation; (Ref: Para. A12-A14)

(c) Develop an expectation of recorded amounts or ratios and evaluate whether the expectation is sufficiently precise to identify a misstatement that, individually or when aggregated with other misstatements, may cause the financial statements to be materially misstated; and (Ref: Para. A15)

(d) Determine the amount of any difference of recorded amounts from expected values that is acceptable without further investigation as required by paragraph 7. (Ref: Para. A16)

Analytical Procedures that Assist When Forming an Overall Conclusion

6. The auditor shall design and perform analytical procedures near the end of the audit that assist the auditor when forming an overall conclusion as to whether the financial statements are consistent with the auditor's understanding of the entity. (Ref: Para. A17-A19)

Investigating Results of Analytical Procedures

7. If analytical procedures performed in accordance with this ISA identify fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount, the auditor shall investigate such differences by:

(a) Inquiring of management and obtaining appropriate audit evidence relevant to management's responses; and

(b) Performing other audit procedures as necessary in the circumstances. (Ref: Para. A20-A21)

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[3] ISA 330, paragraph 18.

Application and Other Explanatory Material

Definition of Analytical Procedures (Ref: Para. 4)

A1. Analytical procedures include the consideration of comparisons of the entity's financial information with, for example:

- Comparable information for prior periods.
- Anticipated results of the entity, such as budgets or forecasts, or expectations of the auditor, such as an estimation of depreciation.
- Similar industry information, such as a comparison of the entity's ratio of sales to accounts receivable with industry averages or with other entities of comparable size in the same industry.

A2. Analytical procedures also include consideration of relationships, for example:

- Among elements of financial information that would be expected to conform to a predictable pattern based on the entity's experience, such as gross margin percentages.
- Between financial information and relevant non-financial information, such as payroll costs to number of employees.

A3. Various methods may be used to perform analytical procedures. These methods range from performing simple comparisons to performing complex analyses using advanced statistical techniques. Analytical procedures may be applied to consolidated financial statements, components and individual elements of information.

Substantive Analytical Procedures (Ref: Para. 5)

A4. The auditor's substantive procedures at the assertion level may be tests of details, substantive analytical procedures, or a combination of both. The decision about which audit procedures to perform, including whether to use substantive analytical procedures, is based on the auditor's judgment about the expected effectiveness and efficiency of the available audit procedures to reduce audit risk at the assertion level to an acceptably low level.

A5. The auditor may inquire of management as to the availability and reliability of information needed to apply substantive analytical procedures, and the results of any such analytical procedures performed by the entity. It may be effective to use analytical data prepared by management, provided the auditor is satisfied that such data is properly prepared.

Suitability of Particular Analytical Procedures for Given Assertions (Ref: Para. 5(a))

A6. Substantive analytical procedures are generally more applicable to large volumes of transactions that tend to be predictable over time. The application

of planned analytical procedures is based on the expectation that relationships among data exist and continue in the absence of known conditions to the contrary. However, the suitability of a particular analytical procedure will depend upon the auditor's assessment of how effective it will be in detecting a misstatement that, individually or when aggregated with other misstatements, may cause the financial statements to be materially misstated.

A7. In some cases, even an unsophisticated predictive model may be effective as an analytical procedure. For example, where an entity has a known number of employees at fixed rates of pay throughout the period, it may be possible for the auditor to use this data to estimate the total payroll costs for the period with a high degree of accuracy, thereby providing audit evidence for a significant item in the financial statements and reducing the need to perform tests of details on the payroll. The use of widely recognized trade ratios (such as profit margins for different types of retail entities) can often be used effectively in substantive analytical procedures to provide evidence to support the reasonableness of recorded amounts.

A8. Different types of analytical procedures provide different levels of assurance. Analytical procedures involving, for example, the prediction of total rental income on a building divided into apartments, taking the rental rates, the number of apartments and vacancy rates into consideration, can provide persuasive evidence and may eliminate the need for further verification by means of tests of details, provided the elements are appropriately verified. In contrast, calculation and comparison of gross margin percentages as a means of confirming a revenue figure may provide less persuasive evidence, but may provide useful corroboration if used in combination with other audit procedures.

A9. The determination of the suitability of particular substantive analytical procedures is influenced by the nature of the assertion and the auditor's assessment of the risk of material misstatement. For example, if controls over sales order processing are deficient, the auditor may place more reliance on tests of details rather than on substantive analytical procedures for assertions related to receivables.

A10. Particular substantive analytical procedures may also be considered suitable when tests of details are performed on the same assertion. For example, when obtaining audit evidence regarding the valuation assertion for accounts receivable balances, the auditor may apply analytical procedures to an aging of customers' accounts in addition to performing tests of details on subsequent cash receipts to determine the collectability of the receivables.

Considerations Specific to Public Sector Entities

A11. The relationships between individual financial statement items traditionally considered in the audit of business entities may not always be relevant in the

audit of governments or other non-business public sector entities; for example, in many public sector entities there may be little direct relationship between revenue and expenditure. In addition, because expenditure on the acquisition of assets may not be capitalized, there may be no relationship between expenditures on, for example, inventories and fixed assets and the amount of those assets reported in the financial statements. Also, industry data or statistics for comparative purposes may not be available in the public sector. However, other relationships may be relevant, for example, variations in the cost per kilometer of road construction or the number of vehicles acquired compared with vehicles retired.

The Reliability of the Data (Ref: Para. 5(b))

A12. The reliability of data is influenced by its source and nature and is dependent on the circumstances under which it is obtained. Accordingly, the following are relevant when determining whether data is reliable for purposes of designing substantive analytical procedures:

(a) Source of the information available. For example, information may be more reliable when it is obtained from independent sources outside the entity;[4]

(b) Comparability of the information available. For example, broad industry data may need to be supplemented to be comparable to that of an entity that produces and sells specialized products;

(c) Nature and relevance of the information available. For example, whether budgets have been established as results to be expected rather than as goals to be achieved; and

(d) Controls over the preparation of the information that are designed to ensure its completeness, accuracy and validity. For example, controls over the preparation, review and maintenance of budgets.

A13. The auditor may consider testing the operating effectiveness of controls, if any, over the entity's preparation of information used by the auditor in performing substantive analytical procedures in response to assessed risks. When such controls are effective, the auditor generally has greater confidence in the reliability of the information and, therefore, in the results of analytical procedures. The operating effectiveness of controls over non-financial information may often be tested in conjunction with other tests of controls. For example, in establishing controls over the processing of sales invoices, an entity may include controls over the recording of unit sales. In these circumstances, the auditor may test the operating effectiveness of controls over the recording of unit sales in conjunction with tests of the operating effectiveness of controls over the processing of sales invoices.

[4] ISA 500, "Audit Evidence," paragraph A31.

Alternatively, the auditor may consider whether the information was subjected to audit testing. ISA 500 establishes requirements and provides guidance in determining the audit procedures to be performed on the information to be used for substantive analytical procedures.[5]

A14. The matters discussed in paragraphs A12(a)-A12(d) are relevant irrespective of whether the auditor performs substantive analytical procedures on the entity's period end financial statements, or at an interim date and plans to perform substantive analytical procedures for the remaining period. ISA 330 establishes requirements and provides guidance on substantive procedures performed at an interim date.[6]

Evaluation Whether the Expectation Is Sufficiently Precise (Ref: Para. 5(c))

A15. Matters relevant to the auditor's evaluation of whether the expectation can be developed sufficiently precisely to identify a misstatement that, when aggregated with other misstatements, may cause the financial statements to be materially misstated, include:

- The accuracy with which the expected results of substantive analytical procedures can be predicted. For example, the auditor may expect greater consistency in comparing gross profit margins from one period to another than in comparing discretionary expenses, such as research or advertising.
- The degree to which information can be disaggregated. For example, substantive analytical procedures may be more effective when applied to financial information on individual sections of an operation or to financial statements of components of a diversified entity, than when applied to the financial statements of the entity as a whole.
- The availability of the information, both financial and non-financial. For example, the auditor may consider whether financial information, such as budgets or forecasts, and non-financial information, such as the number of units produced or sold, is available to design substantive analytical procedures. If the information is available, the auditor may also consider the reliability of the information as discussed in paragraphs A12-A13 above.

Amount of Difference of Recorded Amounts from Expected Values that Is Acceptable (Ref: Para. 5(d))

A16. The auditor's determination of the amount of difference from the expectation that can be accepted without further investigation is influenced

[5] ISA 500, paragraph 10.

[6] ISA 330, paragraphs 22-23.

by materiality[7] and the consistency with the desired level of assurance, taking account of the possibility that a misstatement, individually or when aggregated with other misstatements, may cause the financial statements to be materially misstated. ISA 330 requires the auditor to obtain more persuasive audit evidence the higher the auditor's assessment of risk.[8] Accordingly, as the assessed risk increases, the amount of difference considered acceptable without investigation decreases in order to achieve the desired level of persuasive evidence.[9]

Analytical Procedures that Assist When Forming an Overall Conclusion (Ref: Para. 6)

A17. The conclusions drawn from the results of analytical procedures designed and performed in accordance with paragraph 6 are intended to corroborate conclusions formed during the audit of individual components or elements of the financial statements. This assists the auditor to draw reasonable conclusions on which to base the auditor's opinion.

A18. The results of such analytical procedures may identify a previously unrecognized risk of material misstatement. In such circumstances, ISA 315 requires the auditor to revise the auditor's assessment of the risks of material misstatement and modify the further planned audit procedures accordingly.[10]

A19. The analytical procedures performed in accordance with paragraph 6 may be similar to those that would be used as risk assessment procedures.

Investigating Results of Analytical Procedures (Ref: Para. 7)

A20. Audit evidence relevant to management's responses may be obtained by evaluating those responses taking into account the auditor's understanding of the entity and its environment, and with other audit evidence obtained during the course of the audit.

A21. The need to perform other audit procedures may arise when, for example, management is unable to provide an explanation, or the explanation, together with the audit evidence obtained relevant to management's response, is not considered adequate.

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7 ISA 320, "Materiality in Planning and Performing an Audit," paragraph A13.

8 ISA 330, paragraph 7(b).

9 ISA 330, paragraph A19.

10 ISA 315, paragraph 31.