

Special Audit Techniques

5.1 Introduction

Normally, an audit programme specifies the techniques to be employed in the specific case by relating the techniques to the respective areas of accounting. Chapter 3 of the Professional Competence Course Study Material contains various techniques generally employed for auditing the books of account. For example, the techniques of posting, checking and casting all related to the subsidiary books of account and the principal books of account. Vouching will be in respect of all the transactions whether appearing in the cash book or in any journal. The confirmation technique is appropriate in relation to personal accounts balances, bank balances or securities lodged with others. In this Chapter, we shall deal with some of these techniques in greater detail.

5.1.1 Confirmation – It is a method of collecting audit evidence which consists of the response to an inquiry to corroborate information contained in the accounting records. It may be interesting to note that the AICPA included direct confirmation of sundry debtors in its Auditing Standards after the decision of Mckesson and Robbins. Same procedure is applicable in case of creditors as well. For example, the auditor requests confirmation of receivable by direct communication with debtors. The Guidance Note on Audit of Sundry Debtors, Loans and Advances issued by the Institute of Chartered Accountants of India has recommended that balances outstanding against debtors and as loan and advances should be confirmed by a procedure of communication with the parties. The Guidance Note provides the following:

The checking of the debtors' ledger balances does not merely involve a comparison of the balances in the ledger with those shown in the schedule. Each account should be scrutinised in order to do the 'aging' of the debtors. The debtors' schedule should have appropriate columns to indicate the period over which each account is outstanding. The auditors must not assume that any balance which is confirmed is necessarily realisable. Where debts are written off, the auditor should satisfy himself whether the write off was based on appropriate considerations of the relevant facts. Debts often include claims made against insurance companies, shipping companies, railways, etc. and the auditor should ascertain that the claims are realisable. Correspondence should be seen in all major cases in order to ascertain whether the claims have been acknowledged and whether there is a reasonable possibility of their being realised. If it appears that they are not collectible, they should be shown as doubtful. These recommendations can be applied to creditors as well. Based on the above recommendations an outline of a confirmation procedure may be as under:

1. The confirmatory letters should be sent out within a period of 15 to 21 days of the end of the year, even when the audit is taken up much later in respect of balances either as at the date of the Balance Sheet or as at another selected date before the close of the year.

5.2 Advanced Auditing and Professional Ethics

2. If the number of balances is large, letters may be issued only in respect of major debtors and creditors, selected according to some system. Having selected the accounts, the balances wherein are to be confirmed, the client should be requested to prepare statements of account showing the position of the balances as at the date of confirmation. A nil balance account should also be included.
3. The statements of account prepared by the client should be compared by the auditor with the balances of debtors and creditors. Therefore, he should maintain control over them until they are posted.
4. Either each statement of account should contain a request for confirmation of the balance shown therein or it should be forwarded with a separate letter by the auditor or the client, as may have been mutually agreed upon. The letter or the statement should show the address of the auditor to which the statements of account after the confirmation are to be returned. A stamped envelope containing the auditor's name and address should be enclosed.
5. Letters or statements should be posted under the supervision of the auditor.
6. In cases where replies are not received within a reasonable time, a reminder should be sent out by the auditor. Letters received back undelivered should be sent again at the correct address.
7. On receipt of replies from the parties, it should be verified that either the balances have been confirmed or the amounts confirmed can be satisfactorily reconciled with the balances shown by the books of account of the client. The client should be requested to prepare reconciliation statements where necessary.
8. In every case, where a reconciliation statement has been prepared, it should be verified that the difference in the amount confirmed and that shown by the books of account is not the result of an omission to credit any amount received from the party or failure to debit him with any amount of sales or to credit him with the value of goods received with a view to suppressing or inflating profit.
9. If the difference is the result of some dispute or claim for allowance or return, etc. not afforded to a party, it should be confirmed that there exists a provision equal to the difference which ultimately may have to be credited to him.

Direct confirmation procedure may be performed both for sundry creditors and sundry debtors. Special precautions in respect of creditors to be taken are as under:

- (i) The Creditors' ledger trial balance should be extracted by the client and agreed with the Control Account, if any, before balances are selected for confirmation.
- (ii) The provision made for the amount payable in respect of goods received within the last week of the close of the year should be verified by comparing entries in the Goods Inward Register with the Purchase Journal.
- (iii) A certificate should be obtained from the client that all the liabilities which have accrued up to the date of the Balance Sheet have been taken into account.

Special precautions in respect of sundry debtors to be taken are as under:

- (i) The Debtors' ledger trial balance should be extracted by the client and agreed with the Control Account, if any, before balances are selected for confirmation.
- (ii) The adjustment of sales made at the close of the year should be verified by comparing the entries in the Goods Outward Register for two weeks before the close of the year with these in the Sales Journal.
- (iii) The accounts to be verified by direct confirmation should be settled on the basis of internal control procedures.

5.1.2 Inquiry – SA 500 mentions inquiry as one of the methods of collecting audit evidence by seeking appropriate information from knowledgeable persons inside or outside the entity. Inquiries may range from formal written inquiries addressed to third parties to informal oral inquiries addressed to persons inside the entity. Responses to inquiries may provide the auditor with information which he did not previously possess or may not provide him with corroborative evidence. The need for inquiry may arise at every stage of auditing. Wherever any transaction or entry is not readily understandable or its effects are not readily apparent, the auditor should not hesitate to make enquiry from the appropriate official of the client. Apart from this, students should remember that the auditor of a company has to make a statement in his report on whether he has obtained all the information and explanations that he considered necessary for his audit. This requirement suggests that inquiry is one of the processes of the whole scheme of auditing and, accordingly, the Companies Act, 1956 has given certain powers to the auditor in Section 227(1) and has cast certain duties on company officials in Section 221. Besides, Section 227(IA) of the Companies Act, 1956 casts upon the auditor a specific duty to inquire into certain specified transactions. How the auditor is expected to perform the duty of enquiry as contained in Section 227(IA) is given in Chapter "Audit Report".

5.1.3 Observation – According to SA 500, Observation consists of looking at a process or procedure being performed by others, for example, the auditor's observation of inventory counting by the entity's personnel, or of the performance of control activities. Observation provides audit evidence about the performance of a process or procedure, but is limited to the point in time at which the observation takes place, and by the fact that the act of being observed may affect how the process or procedure is performed.

5.1.4 Analytical Review Procedures – Analytical review procedures may be defined as substantive tests of financial information made by a study of comparisons and relationship among data.

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

5.4 Advanced Auditing and Professional Ethics

the same industry.

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.

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.

Essentially these procedures ensure that the various items making up the financial statements are consistent with:

- (a) Each other (for example, the relationship between debtors and sales, or current assets and current liabilities).
- (b) Known trends.
- (c) The auditor's knowledge of the business.

The auditor should ask the following questions:

- (a) What data, ratios and statistics exist which are of significance for the business?
- (b) What should they be compared with (i.e., what yard-stick)?
- (c) Are there any variations between (a) and (b) which the auditors would expect to occur?

The following table summarizes the position:

Types of data, ratios etc.	Comparison with
Financial data (e.g., items in annual statements, management accounts, budgets, etc.)	(i) Corresponding previous period. (ii) Budgets and forecasts (if available).
Non-financial data (e.g., production and employment statistics)	(i) Entries in accounting records. (ii) Other financial data.
Ratios and percentages (developed from financial and non- financial data; for example inventory turnover ratio)	(i) Preceding period. (ii) Budgets and forecasts. (iii) Industry Statistics.

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 evidential matter 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. In addition, in some cases, analytical procedures can be more effective or efficient than tests of details in reducing detection risk for specific financial statement assertions.

Analytical procedures in planning the audit – In the planning stage, analytical procedures assist the auditor in understanding the client's business and in identifying areas of potential risk by indicating aspects of and developments in the entity's business of which he was previously unaware. This information will assist the auditor in determining the nature, timing and extent of his other audit procedures. Analytical procedures in planning the audit use both financial data and non-financial information, such as number of employees, square feet of selling space, volume of goods produced and similar information.

Analytical procedures used as substantive tests – When designing and performing substantive analytical procedures, either alone or in combination with tests of details, as substantive procedures in accordance with SA 330¹, the auditor shall:

- (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;
- (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;
- (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
- (d) Determine the amount of any difference of recorded amounts from expected values that is acceptable without further investigation.

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

¹ SA 330, paragraph 20.

5.6 Advanced Auditing and Professional Ethics

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.

Extent of reliance on analytical procedures – 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 entity²;
- (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 specialised 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.

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. Alternatively, the auditor may consider whether the information was subjected to audit testing. SA 500 (Revised) establishes requirements and provides guidance in determining the audit procedures to be performed on the information to be used for substantive analytical procedures³.

Analytical Procedures that Assist When Forming an Overall Conclusion – 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.

The results of such analytical procedures may identify a previously unrecognised risk of

² SA 500 (Revised), "Audit Evidence", paragraph A31.

³ SA 500 (Revised), paragraph 10.

material misstatement. In such circumstances, SA 315 requires the auditor to revise the auditor's assessment of the risks of material misstatement and modify the further planned audit procedures accordingly⁴.

The analytical procedures performed in accordance with paragraph 6 of "SA 520 Analytical Procedure" may be similar to those that would be used as risk assessment procedures.

This technique has been discussed at the PCC level. However in view of importance of this technique in the context of growing complexities, diversities and volumes of business, it requires a more detailed treatment in the specific area of ratio analysis and related matters. It should be appreciated that an audit programme will be realistic only after the auditor has modified in the light of his experience of the changes and of the state of internal controls operating in the organisation. If the auditor can perceive some of the imperatives under which the management operates and the relationship of the business with the economy and environment, he would be able to make the audit programme far more objective. Conflict of interests, inflation, inter-company relations, scarcity conditions, captive market, control by the State, etc. are some of the forces that condition a company's working and management approach to a large extent.

The auditor normally performs an audit by placing reliance on the internal control system. A company's control system may provide for a maximum holding of a particular raw material but if the raw material is a controlled commodity and the supply is irregular, it is obvious that the internal control rule about the maximum or minimum holding of the raw material is of no use to the management which is concerned with the running of the business. As and when the company is allotted a quota or permit for that material irrespective of any consideration, the management will avail of the same. Besides the management will not mind even to procure such material from the open market at a price different from the controlled price, if the materials are needed. For goods to be imported it is often the practice to ask for and obtain an import license for a quantity far larger than is reasonably needed simply to avoid the procedural red tape involved in obtaining a license. Internal control systems, howsoever good, will be of no use in such cases.

It should also be understood that significant non-routine transactions are entered into sometimes in complete disregard of the laid down rules of control. The internal control system may be good as far as the transactions that have been recorded. But if certain transactions are omitted altogether, the internal control system may not be in a position to reveal anything about them. An auditor should always bear in mind these limitations of the control system. These limitations have made it even more important for the auditor to supplement his routine audit programme, by overall tests which are based on judgment of what is reasonable. Ratio analysis is an audit approach that helps the auditor to make an overall assessment of the data by reference to attendant factors.

Relevance of Ratio and Trend Analysis – Ratio analysis is an important supplement to the audit process which has the merit of bringing to focus the abnormalities, deviations and unexpected variations. A ratio measures the relative magnitude of two related factors. It does

⁴ SA 315, paragraph 30.

5.8 Advanced Auditing and Professional Ethics

not have any significance of its own except to provide material for further analysis, interpretation and conclusion. It is a means to objectively assess or diagnose the financial health of a business. The auditor can take a broad view of the data under audit by adopting ratio analysis. He can assess whether the data is reasonable, valid and consistent. Through the process of ratio analysis, any abnormal relationship between two related matters is most likely to be disclosed. It, however, presupposes certain amount of knowledge on the part of the auditor about what should be the reasonable relationship. This may be acquired by the auditor from his knowledge and experience gained elsewhere or from the knowledge of the past relationships. In addition, if there exists certain known relationship, the matter becomes simpler. For example, if the rate of Provident Fund contribution is 10% of the basic pay and dearness allowance, either set of the data can be proved by the other having regard to the given relationship. If the auditor finds the Provident Fund contribution to be of the order of say 6% of the total of basic pay after dearness allowance, this immediately alerts him that some abnormal feature exists, though he should not hasten to the conclusion that it is an error. There may be circumstances, e.g., newly appointed employees are not entitled to the Provident Fund benefit for certain period or there may be some retired persons re-employed who are not entitled to any provident fund benefit.

Therefore, it may be said that ratio analysis makes it possible for the auditor to locate problem areas which can thereafter be subjected to scrutiny for confirming that the problem really exists or it is manifestation of some real abnormality that business has experienced during the period covered by the audit. This may help also in forestalling an approaching danger before it has done much damage. It is felt that if, at the audit planning stage, the data are subjected to ratio analysis; the auditor would be in a position to plan his audit programme more purposefully. He will be able to devote an appropriate amount of time and effort in areas where abnormalities have been detected. The analysis of ratios and relationships has two phases:

1. The determination and measurement of changes and inter- relationships in data.
2. The scrutiny, explanation and evaluation of the changes and their significance in light of the circumstances.

It has been stated earlier that data must be inter-related for any effective ratio analysis. Apart from this, certain businesses have their own features. A business with high sales volume at a low margin of profit is expected to have a high inventory turnover ratio. If the ratio is low, it will be a pointer for further probe. Similarly, a business offering cash discount for prompt settlement of accounts will have a high debtors' turnover ratio. A business dealing with a widely needed scarce material will in most cases have customer's advances against supply rather than any debtors' balances. On the other hand, in a business where Government is the principal buyer, it is the general nature that the margin of profit is high and the debtors outstanding quite large. For the auditor to properly understand the implications of ratios, such background knowledge is essential.

Also, the auditor is expected to possess the knowledge of normal relationship between related variables in the business he is auditing so that he can discern deviation from the normal and assess significant variation in the relationship. This knowledge can be derived from either a comparison with the concerned business's past corresponding data or by reference to

readymade data available about the industry from some official source or by comparing the data with the corresponding data found in another company engaged in the same line of industry in similar circumstances.

The external data are generally considered to be objective and independent in character. These, however, should be used with discretion. The basis and method of compilation, the period covered and the source and author of the data are some of the considerations needed before they are used for comparisons. In India, the Reserve Bank of India Bulletin, the Bombay Stock Exchange Directory, the Calcutta Stock Exchange Directory, Kothari's Economic and Industrial Guide are some of the publications that contain reliable financial information about companies, individually or as a class. However, they should not be considered as a readymade material for comparison because the manner of compilation, the circumstances, etc., may be dissimilar. Subject to review of these data for adjustment these may be used for comparison.

Most of the ratios known to us from our study of Advanced Accounting can be used by the auditor in evaluating different aspects of the financial health of a concern. However, the auditor should be experienced and skillful enough to know what ratio is appropriate for his purpose, what they would reveal and how to relate matters; also, what can be expected as a result of particular ratio. For example, to know whether the concern's cost of sales bears the normal relation to sales, the auditor may compute gross profit ratio. Now if the gross profit ratio shows any abnormality, depending upon the abnormality, further inference may be drawn for verification and confirmation. If the gross profit ratio is higher than normal, the possibilities that immediately should strike one are: (i) sales overstated, (ii) stock overstated or over valued, (iii) purchases understated, (iv) wages and other costs understated, etc. Now the auditor, having localised the problem areas, can check them extensively to find out whether the doubts are true or certain abnormal situations did prevail that accounts for the distortion. It is also natural for the auditor to expect the ratio of gross profit to net profit to be up in such circumstances unless explained by other abnormal factors working in the opposite direction. For example, the selling and distribution cost or interest on borrowings might have gone up significantly to eat up the excess margin of gross profit. Take another example: suppose the turnover ratio (Sales/Capital) shows a considerable improvement over the last year and there is no concurrent increase in the solvency or liquidity ratios. The auditor should inquire why it is so. It is quite possible that the company has evolved a better system of financial management. It is also possible that (i) sales have been inflated or (ii) the credit policy was defective to result into huge accumulation of debtors or (iii) there had been defalcation of sales proceeds. There are certain quantitative ratios which may be particularly helpful to the auditor, e.g., the ratio between the main raw material consumed to total production may prove both the figures. Auditors can use a number of other quantitative ratios like ratio of man hours to production to verify the accuracy of figures in the Profit and Loss Account and the Balance Sheet. It would thus be seen that by working out ratios, the auditor can identify areas where detailed enquiries are called for. Like a physician, he examines symptoms, analyses them and works out a diagnosis. Such a procedure may prove immensely helpful when used as a supplementing technique to the normal vouch and post audit.

Ratio analysis can be of great use for overall checks. It is to be expected that figures of sales

5.10 Advanced Auditing and Professional Ethics

will change together with changes in purchases, wages, expenses, etc. But the mutual relationship of most related figures can change only because of extraordinary circumstances, favourable or adverse. Working out the relationship of ratios, therefore, and comparing them with the previous years, corresponding ratios serve to establish the apparent reasonableness of the figures. To the extent reasonableness is established, the auditor may feel to be on a firm ground when he issues his report. Of course, it should be noted that ratios are one of the ways of application of overall tests.

A good approach is to study the trends. Trend analysis is of course mainly resorted to in investigations. However, it may, be developed as a useful audit tool also to locate areas showing abnormalities. If trends of sales and purchases are studied over a reasonable period say 5 years - any distortion in their relations will be apparent. Similarly, trend of cost of production can be studied along with the trend of the major components of cost. Even the trend of significant ratios can be studied by the auditor over a number of years either by plotting them on a graph paper or by setting them chronologically. The objective of comparison of absolute figures by reference to the corresponding figures of the previous year has been stated by the Government in the context of the requirement in the Pre-Revised Schedule VI to the Companies Act, as follows:

"The intention of displaying the figures relating to the previous year is to facilitate the comparative study of the items in the Balance Sheet and Profit and Loss Account, so that the significance of the figures for the current year can be more readily appreciated and understood".

Under the Revised Schedule VI which is applicable from 01.04.2011, except in the case of the first Financial Statements laid before the Company (after its incorporation) the corresponding amounts (comparatives) for the immediately preceding reporting period for all items shown in the Financial Statements including notes shall also be given.

These all highlight one fact: those relevant ratios may be of great value for proper financial analysis and this may bring out the problem areas on which the auditor is directly interested. Students are referred to Study Material in Advanced Accounting.

Investigating Results of Analytical Procedures – If analytical procedures performed in accordance with this SA 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.

Further investigation, by means of audit procedures designed to produce a satisfactory conclusion, would be required if management is unable to provide an explanation or if the explanation is not considered adequate.

Analytical procedures used in the overall review – 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.

The conclusions drawn from the results of analytical procedures designed and performed 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.

The results of such analytical procedures may identify a previously unrecognised risk of material misstatement. In such circumstances, SA 315 requires the auditor to revise the auditor's assessment of the risks of material misstatement and modify the further planned audit procedures accordingly⁵.

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

5.2 Statistical Sampling in Auditing

The audit evidence should, in total, enable the auditor to form an opinion on the financial information. In forming such an opinion, the auditor does not normally examine all of the information that is available to him because he can reach a conclusion about an account balance, class of transactions or a control by way of judgmental or statistical sampling procedures.

Statistical sampling technique is increasingly becoming popular with the auditors. Statistical sampling in auditing stands for the technique of forming an opinion about a group of items on the basis of an examination of a few of the items. It may be recalled that test checking technique is one of the accepted auditing techniques, which most of the professional bodies of the world, including the Institute of Chartered Accountants of India have recommended for use by the members on a proper consideration of facts and applicability. We have also seen the shortcomings of the test check technique as a basis for forming informed opinion about the accounts under audit. Statistical sampling technique may be considered as a refined application of the test check technique which has all the advantages of the latter with the shortcomings removed. The greatest merit of statistical sampling technique lies in its being based on the statistical theory of probability. It is however, not as simplistic as the test checks.

On the basis of the audit carried out, an auditor is required to give a report containing his opinion, about truth and fairness of the accounting statements. In expressing his opinion the auditor never guarantees absolute accuracy of the accounting statements; but he takes a risk of being challenged about the validity of his opinion. Even after a complete checking, he cannot be sure that the accounts and the resulting accounting statements are absolutely free from error, manipulation, fraud or mistake. However, the opinion that he expresses, represents his overall assessment of the truth and fairness of the accounting statement based on his satisfaction that he has applied all professional skill at his command to see that no material error or fraud exists to distort the true and fair view of the accounting statements.

When he checks only a part of the total accounting data in lieu of checking of all the data, it is obvious that the degree of satisfaction obtainable from the latter would not be available;

⁵ SA 315, paragraph 30.

5.12 Advanced Auditing and Professional Ethics

however, a small loss of the degree of satisfaction will be more than compensated by the considerable savings in time and costs for having checked only a fraction of the total data. It is again true that bigger the sample, the greater would be the satisfaction, but from a practical consideration the minimum requisite sample size, if determined statistically will be adequate to express an opinion about the overall truth and fairness of the total data within a reasonable range of precision and with reasonable confidence.

It is important to recognize that certain testing procedures do not come within the definition of sampling. Tests performed on 100% of the items within a population do not involve sampling. Likewise the technique of selecting all items within a population which have a particular significance (e.g., all items over a certain amount) does not qualify as sampling with respect to the portion of the population examined nor with respect to the population as a whole, since the items were not selected from the total population on a basis that was expected to be representative. Such items might imply some characteristic of the remaining portion of the population but would not be the basis for a valid conclusion about the remaining portion of the population.

5.2.1 Design of the sample and its evaluation – In designing an audit sample, the auditor has to consider the following -

Audit objectives - Audit sampling enables the auditor to obtain and evaluate audit evidence about some characteristic of the items selected in order to form or assist in forming a conclusion concerning the population from which the sample is drawn. Audit sampling can be applied using either non-statistical or statistical sampling approaches.

When designing an audit sample, the auditor's consideration includes the specific purpose to be achieved and the combination of audit procedures that is likely to best achieve that purpose. Consideration of the nature of the audit evidence sought and possible deviation or misstatement conditions or other characteristics relating to that audit evidence will assist the auditor in defining what constitutes a deviation or misstatement and what population to use for sampling. In fulfilling the requirement of paragraph 8 of SA 500 (Revised), when performing audit sampling, the auditor performs audit procedures to obtain evidence that the population from which the audit sample is drawn is complete.

Population – The population is the entire set of data from which the auditor wishes to sample in order to reach a conclusion. The auditor determines that the population from which he draws the sample is appropriate for the specific audit objective. For example, if the auditor's objective were to test for overstatement of accounts receivable, his population could be defined as the accounts receivable trial balance. On the other hand, if he was testing for understatement of accounts payable, his population would not be the accounts payable trial balance but could be subsequent disbursements, unfair invoices, unmatched receiving reports or other populations that would provide evidence of understatement of accounts payable. The individual items that make up the population are known as sampling units. The population can be divided into sampling units in a variety of ways. For example, if the auditor's objective is to test the validity of the entity's accounts receivable, he could define the sampling unit for confirmation purposes as either customer balances or individual customer invoices. The auditor should define the sampling unit in order to obtain an efficient and effective sample to

achieve the particular audit objective. Further regarding population, it should be noted:

- (a) 'Population', or 'field', or 'universe' (i.e. the total number of items potentially subject to scrutiny within a defined area, must be sufficiently large.
- (b) The system which produces the records to be tested must be sufficiently reliable.
- (c) All items within a particular population must be homogeneous, i.e. they must all fall within the same 'category'.
- (d) Items within the population must be both (i) identifiable; and (ii) accessible.

Such selection should therefore be entirely random, and for this purpose random number tables are often used. The difficulty often arises, however, that the items within the population are themselves not identifiable in a way which enables such random selection to take place. Petty cash vouchers, for example, are rarely preprinted with a sequential numbering series and randomness will thus have to be ensured in some other way; it will hardly be practical for the auditor himself to set about entering the numbers on the vouchers.

Confidence level – The reliability referred to is usually termed the confidence level. More precisely, in an auditing context, it is the mathematical probability that the mis-statement rate in the sample will not differ from the error rate in the population by more than a stated amount. Confidence level is conveniently expressed as a percentage. Thus, when we speak of a confidence level of 90% we mean that there are 90 chances that the item would fall within the confidence intervals of about 90 to 100, against 10 chances, i.e. the risk we take, that it will not (once again, at a specified level of precision). The confidence level is therefore seen to be complementary to risk.

Precision – The precision may be defined with which we can describe the attributes of a given population. For example, our sample may be chosen such that the mis-statement in the population can be proved to be within 5 percent of the monetary value. But how precise do we require this percentage to be? The bigger our sample, clearly the more precise we can be, but we can never be completely precise for the same reasons as we can never be 100 percent confident. The degree of precision required will depend on the materiality of the items in question. For example, if ₹ 3,000 of mis-statement in a sales ledger population of ₹ 100,000 would be considered to be just not material, then 3 percent would be our precision limits. From this you will deduce that confidence level and precision limits are essentially inter-related, and the two combined would determine the quality of testing. The auditor's assessment of the following factors will primarily be responsible for selecting total limit:

- (i) Evaluation of the functioning of the system of internal control in the area under examination.
- (ii) Materiality of the amounts involved.

5.2.2 Defining Mis-statement – The auditor must determine the significance of potential mis-statement as it will determine the way in which tests should be conducted. As per SA 450, a Misstatement is a difference between the amounts, classification, presentation, or disclosure of a reported financial statement item and the amount, classification, presentation, or disclosure that is required for the item to be in accordance with the applicable financial reporting framework.

5.14 Advanced Auditing and Professional Ethics

Tolerable mis-statement is the maximum mis-statement in the population that the auditor would be willing to accept and still concludes that the result from the sample has achieved his audit objective. Tolerable mis-statement is considered during the planning stage and is related to the auditor's preliminary judgement about materiality. The smaller the tolerable mis-statement, the larger the sample size the auditor will require. Further, we must determine the significance of potential mis-statement, for this will in turn determine the way in which we conduct our tests. For example, in compliance testing any mis-statement will be significant irrespective of its monetary value, because any failure of internal control procedures reduces the reliance that we can place on those procedures. Hence tests of detail will have to be extended. It is not the size of the mis-statement that is significant in these circumstances, but its nature, (indeed there may be no monetarily quantifiable misstatement at all e.g. a payroll may not have been check cast, but it may still be correct). With substantive testing, on the other hand, we are interested in discovering whether there is material misstatement, so in this situation it is purely the amount of the mis-statement that is relevant.

5.2.3 Sample size – The level of sampling risk that the auditor is willing to accept affects the sample size required. The lower the risk the auditor is willing to accept, the greater the sample size will need to be. The sample size can be determined by the application of a statistically-based formula or through the exercise of professional judgment. Appendices 2 and 3 indicate the influences that various factors typically have on the determination of sample size. When circumstances are similar, the effect on sample size of factors such as those identified in Table 1 and 2 will be similar regardless of whether a statistical or non-statistical approach is chosen.

5.2.4 Sampling risk – Audit sampling enables the auditor to obtain and evaluate audit evidence about some characteristic of the items selected in order to form or assist in forming a conclusion concerning the population from which the sample is drawn. Audit sampling can be applied using either non-statistical or statistical sampling approaches.

When designing a sample, the auditor determines tolerable misstatement in order to address the risk that the aggregate of individually immaterial misstatements may cause the financial statements to be materially misstated and provide a margin for possible undetected misstatements.

The risk that the auditor's conclusion based on a sample may be different from the conclusion if the entire population were subjected to the same audit procedure. Sampling risk can lead to two types of erroneous conclusions:

- (i) In the case of a test of controls, that controls are more effective than they actually are, or in the case of a substantive procedure i.e. test of details, that a material misstatement does not exist when in fact it does. The auditor is primarily concerned with this type of erroneous conclusion because it affects audit effectiveness and is more likely to lead to an inappropriate audit opinion.
- (ii) In the case of a test of controls, that controls are less effective than they actually are, or in the case of a substantive procedure i.e. test of details, that a material misstatement exists when in fact it does not. This type of erroneous conclusion affects audit efficiency as it would usually lead to additional work to establish that initial conclusions were incorrect.

The risk of under reliance and the risk of incorrect rejection affect audit efficiency as they would ordinarily lead to additional work being performed by the auditor, or the entity, which would establish that the initial conclusions were incorrect. The risk of over reliance and the risk of incorrect acceptance affect audit effectiveness and are more likely to lead to an erroneous opinion on the financial statements than either the risk of under reliance or the risk of incorrect rejection.

Sample size is affected by the level of sampling risk the auditor is willing to accept from the results of the sample. The lower the risk the auditor is willing to accept, the greater the sample size will need to be.

5.2.5 Tolerable misstatement – A monetary amount set by the auditor in respect of which the auditor seeks to obtain an appropriate level of assurance that the monetary amount set by the auditor is not exceeded by the actual misstatement in the population. When designing a sample, the auditor determines tolerable misstatement in order to address the risk that the aggregate of individually immaterial misstatements may cause the financial statements to be materially misstated and provide a margin for possible undetected misstatements. Tolerable misstatement is the application of performance materiality, as defined in SA 320 (Revised)⁶, to a particular sampling procedure. Tolerable misstatement may be the same amount or an amount lower than performance materiality.

5.2.6 Tolerable rate of deviation – A rate of deviation from prescribed internal control procedures set by the auditor in respect of which the auditor seeks to obtain an appropriate level of assurance that the rate of deviation set by the auditor is not exceeded by the actual rate of deviation in the population.

Statistical sampling procedures – There are many different types of statistical sampling plans, but whatever type is used, procedures for conducting a test will be as follows:

- (a) decide on the relevant confidence level and precision limits;
- (b) calculate the sample size using an appropriate formula or tables designed for the purpose;
- (c) select the sample using random methods;
- (d) carry out the necessary tests;
- (e) appraise the results.

The most common types of plans adopted by auditors are: Acceptance sampling (with discovery sampling a variation) or Estimation sampling, which may be used to determine:

- (a) population variables, or
- (b) population attributes.

Selection with the aid of the computer – The auditor may use a computer to render considerable assistance in the performance of statistical sampling tests, employing the following methods:

- (a) **Interval sampling** – The computer is programmed to select every n th item stored on magnetic tape, and the items so selected can be copied on to a separate tape and

⁶ Standard on Auditing (SA) 320 (Revised), "Materiality in Planning and Performing an Audit", paragraph 9.

printed out in the form required by the auditor.

- (b) **Random number selection** – The technique of random number selection can be computerised, the random numbers being stored on tape or generated by the computer separately for each application.
- (c) **Random Interval selection** – The dangers of selecting a biased example by the use of a uniform interval can be avoided through the use of random variation of the interval between successive items. Random intervals are selected from random number tables maintained on magnetic tape, or produced by means of a random number generator program.

While applying statistical sampling, it should be remembered that materiality is one of the major considerations to decide whether or not a sample should be selected. For instance in case of certain enterprises like real estate builders, agents, merchant houses, etc. the total number of transactions may be relatively very small and hence are not appropriate for the selection of a sample. Even in case of major enterprises, there are certain items which are so significant that the records relating to them should be scrutinized by the auditor at new item by item basis. For example, the year end closing entries in the journal may be manipulated and, therefore, each entry must be carefully examined and authenticated by the auditor. In actual practice many firms of Chartered Accountants have found limited use of statistical sampling than anticipated by them. The various reasons which may be attributed to this state of affairs are as under:

- (i) Audit has never been a mathematical discipline,
- (ii) Designing and sampling schemes properly take unduly long time.
- (iii) To draw valid conclusions on the basis of statistical sampling, all members of the audit team should have an excellent grasp of the statistical principles involved,

5.2.6 Selection of the sample – The auditor should select sample items in such a way that the sample can be expected to be representative of the population. This requires that all items in the population have an opportunity of being selected.

There are many methods of selecting samples. The principal methods are as follows:

- (a) Random selection (applied through random number generators, for example, random number tables).
- (b) Systematic selection, in which the number of sampling units in the population is divided by the sample size to give a sampling interval, for example 50, and having determined a starting point within the first 50, each 50th sampling unit thereafter is selected. Although the starting point may be determined haphazardly, the sample is more likely to be truly random if it is determined by use of a computerised random number generator or random number tables. When using systematic selection, the auditor would need to determine that sampling units within the population are not structured in such a way that the sampling interval corresponds with a particular pattern in the population.

- (c) Monetary Unit Sampling is a type of value-weighted selection (as described in Appendix 1) in which sample size, selection and evaluation results in a conclusion in monetary amounts.
- (d) Haphazard selection, in which the auditor selects the sample without following a structured technique. Although no structured technique is used, the auditor would nonetheless avoid any conscious bias or predictability (for example, avoiding difficult to locate items, or always choosing or avoiding the first or last entries on a page) and thus attempt to ensure that all items in the population have a chance of selection. Haphazard selection is not appropriate when using statistical sampling.
- (e) Block selection involves selection of a block(s) of contiguous items from within the population. Block selection cannot ordinarily be used in audit sampling because most populations are structured such that items in a sequence can be expected to have similar characteristics to each other, but different characteristics from items elsewhere in the population. Although in some circumstances it may be an appropriate audit procedure to examine a block of items, it would rarely be an appropriate sample selection technique when the auditor intends to draw valid inferences about the entire population based on the sample.

5.2.7 Performing Audit Procedures – An example of when it is necessary to perform the procedure on a replacement item is when a cancelled cheque is selected while testing for evidence of payment authorisation. If the auditor is satisfied that the cheque has been properly cancelled such that it does not constitute a deviation, an appropriately chosen replacement is examined.

An example of when the auditor is unable to apply the designed audit procedures to a selected item is when documentation relating to that item has been lost.

An example of a suitable alternative procedure might be the examination of subsequent cash receipts together with evidence of their source and the items they are intended to settle when no reply has been received in response to a positive confirmation request.

5.2.8 Nature and Cause of Deviations and Misstatements – In analysing the deviations and misstatements identified, the auditor may observe that many have a common feature, for example, type of transaction, location, product line or period of time. In such circumstances, the auditor may decide to identify all items in the population that possess the common feature, and extend audit procedures to those items. In addition, such deviations or misstatements may be intentional, and may indicate the possibility of fraud.

5.2.9 Projecting Misstatements – The auditor is required to project misstatements for the population to obtain a broad view of the scale of misstatement but this projection may not be sufficient to determine an amount to be recorded.

When a misstatement has been established as an anomaly, it may be excluded when projecting misstatements to the population. However, the effect of any such misstatement, if uncorrected, still needs to be considered in addition to the projection of the non-anomalous misstatements.

5.18 Advanced Auditing and Professional Ethics

For tests of controls, no explicit projection of deviations is necessary since the sample deviation rate is also the projected deviation rate for the population as a whole. SA 330⁷ provides guidance when deviations from controls upon which the auditor intends to rely are detected.

5.2.10 Evaluating Results of Audit Sampling –The auditor shall evaluate:

- (a) The results of the sample; and
- (b) Whether the use of audit sampling has provided a reasonable basis for conclusions about the population that has been tested.

For tests of controls, an unexpectedly high sample deviation rate may lead to an increase in the assessed risk of material misstatement, unless further audit evidence substantiating the initial assessment is obtained. For tests of details, an unexpectedly high misstatement amount in a sample may cause the auditor to believe that a class of transactions or account balance is materially misstated, in the absence of further audit evidence that no material misstatement exists.

In the case of tests of details, the projected misstatement plus anomalous misstatement, if any, is the auditor's best estimate of misstatement in the population. When the projected misstatement plus anomalous misstatement, if any, exceeds tolerable misstatement, the sample does not provide a reasonable basis for conclusions about the population that has been tested. The closer the projected misstatement plus anomalous misstatement is to tolerable misstatement, the more likely that actual misstatement in the population may exceed tolerable misstatement. Also if the projected misstatement is greater than the auditor's expectations of misstatement used to determine the sample size, the auditor may conclude that there is an unacceptable sampling risk that the actual misstatement in the population exceeds the tolerable misstatement. Considering the results of other audit procedures helps the auditor to assess the risk that actual misstatement in the population exceeds tolerable misstatement, and the risk may be reduced if additional audit evidence is obtained.

If the auditor concludes that audit sampling has not provided a reasonable basis for conclusions about the population that has been tested, the auditor may:

- Request management to investigate misstatements that have been identified and the potential for further misstatements and to make any necessary adjustments; or
- Tailor the nature, timing and extent of those further audit procedures to best achieve the required assurance. For example, in the case of tests of controls, the auditor might extend the sample size, test an alternative control or modify related substantive procedures.

Table 1: Examples of Factors Influencing Sample Size for Tests of Controls

The following are factors that the auditor may consider when determining the sample size for tests of controls. These factors, which need to be considered together, assume the auditor

⁷ SA 330, "The Auditor's Responses to Assessed Risks", paragraphs 17 and A41.

does not modify the nature or timing of tests of controls or otherwise modify the approach to substantive procedures in response to assessed risks.

FACTOR	EFFECT ON SAMPLE SIZE	
1. An increase in the extent to which the auditor's risk assessment takes into account relevant controls	Increase	The more assurance the auditor intends to obtain from the operating effectiveness of controls, the lower the auditor's assessment of the risk of material misstatement will be, and the larger the sample size will need to be. When the auditor's assessment of the risk of material misstatement at the assertion level includes an expectation of the operating effectiveness of controls, the auditor is required to perform tests of controls. Other things being equal, the greater the reliance the auditor places on the operating effectiveness of controls in the risk assessment, the greater is the extent of the auditor's tests of controls (and therefore, the sample size is increased).
2. An increase in the tolerable rate of deviation	Decrease	The lower the tolerable rate of deviation, the larger the sample size needs to be.
3. An increase in the expected rate of deviation of the population to be tested	Increase	The higher the expected rate of deviation, the larger the sample size needs to be so that the auditor is in a position to make a reasonable estimate of the actual rate of deviation. Factors relevant to the auditor's consideration of the expected rate of deviation include the auditor's understanding of the business (in particular, risk assessment procedures undertaken to obtain an understanding of internal control), changes in personnel or in internal control, the results of audit procedures applied in prior periods and the results of other audit

5.20 Advanced Auditing and Professional Ethics

		procedures. High expected control deviation rates ordinarily warrant little, if any, reduction of the assessed risk of material misstatement.
4. An increase in the auditor's desired level of assurance that the tolerable rate of deviation is not exceeded by the actual rate of deviation in the population	Increase	The greater the level of assurance that the auditor desires that the results of the sample are in fact indicative of the actual incidence of deviation in the population, the larger the sample size needs to be.
5. An increase in the number of sampling units in the population	Negligible effect	For large populations, the actual size of the population has little, if any, effect on sample size. For small populations however, audit sampling may not be as efficient as alternative means of obtaining sufficient appropriate audit evidence.

Table 2: Examples of Factors Influencing Sample Size for Tests of Details

The following are factors that the auditor may consider when determining the sample size for tests of details. These factors, which need to be considered together, assume the auditor does not modify the approach to tests of controls or otherwise modify the nature or timing of substantive procedures in response to the assessed risks.

FACTOR	EFFECT ON SAMPLE SIZE	
1. An increase in the auditor's assessment of the risk of material misstatement	Increase	The higher the auditor's assessment of the risk of material misstatement, the larger the sample size needs to be. The auditor's assessment of the risk of material misstatement is affected by inherent risk and control risk. For example, if the auditor does not perform tests of controls, the auditor's risk assessment cannot be reduced for the effective operation of internal controls with respect to the particular assertion. Therefore, in order to reduce audit risk to an acceptably low level, the auditor needs a low detection risk and will rely

		more on substantive procedures. The more audit evidence that is obtained from tests of details (that is, the lower the detection risk), the larger the sample size will need to be.
2. An increase in the use of other substantive procedures directed at the same assertion	Decrease	The more the auditor is relying on other substantive procedures (tests of details or substantive analytical procedures) to reduce to an acceptable level the detection risk regarding a particular population, the less assurance the auditor will require from sampling and, therefore, the smaller the sample size can be.
3. An increase in the auditor's desired level of assurance that tolerable misstatement is not exceeded by actual misstatement in the population	Increase	The greater the level of assurance that the auditor requires that the results of the sample are in fact indicative of the actual amount of misstatement in the population, the larger the sample size needs to be.
4. An increase in tolerable misstatement	Decrease	The lower the tolerable misstatement, the larger the sample size needs to be.
5. An increase in the amount of misstatement the auditor expects to find in the population	Increase	The greater the amount of misstatement the auditor expects to find in the population, the larger the sample size needs to be in order to make a reasonable estimate of the actual amount of misstatement in the population. Factors relevant to the auditor's consideration of the expected misstatement amount include the extent to which item values are determined subjectively, the results of risk assessment procedures, the results of tests of control, the results of audit procedures applied in prior periods, and the results of other substantive procedures.

5.22 Advanced Auditing and Professional Ethics

6. Stratification of the population when appropriate	Decrease	When there is a wide range (variability) in the monetary size of items in the population, it may be useful to stratify the population. When a population can be appropriately stratified, the aggregate of the sample sizes from the strata generally will be less than the sample size that would have been required to attain a given level of sampling risk, had one sample been drawn from the whole population.
7. The number of sampling units in the population	Negligible effect	For large populations, the actual size of the population has little, if any, effect on sample size. Thus, for small populations, audit sampling is often not as efficient as alternative means of obtaining sufficient appropriate audit evidence. (However, when using monetary unit sampling, an increase in the monetary value of the population increases sample size, unless this is offset by a proportional increase in materiality for the financial statements as a whole (and, if applicable, materiality level or levels for particular classes of transactions, account balances or disclosures).

5.3 Risk-Based Audit

Audit should be risk-based or focused on areas of greatest risk to the achievement of the audited entity's objectives. Risk-based audit (RBA) is an approach to audit that analyzes audit risks, sets materiality thresholds based on audit risk analysis and develops audit programmes that allocate a larger portion of audit resources to high-risk areas.

The auditor does not normally need to perform specific audit procedures on all areas of audit. He only needs to design audit programmes and procedures on areas earlier identified as major risks that could result in the financial statements being materially misstated. RBA is an essential element of financial audit- both in the attest audit of the financial statements and in the audit of financial systems and transactions including evaluation of internal controls. It focuses primarily on the identification and assessment of the financial statement misstatement risks and provides a framework to reduce the impact to the financial statement of these identified risks to an acceptable level before rendering an opinion on the financial statements.

It also provides indicators of risks as a basis of opportunity for improvement of auditee risk management and control processes. This affords an opportunity to the auditee to improve its operations from recommendations on risks that do not have a current impact on the financial statements but impact the audited entity's operational strategies and performance over the longer term.

In the context of performance audit, it is the risk to delivery of an activity or scheme or programme of the entity with economy, efficiency and effectiveness. Awareness of areas that puts the programme or resources at risk from the point of view of economy, efficiency and effectiveness helps focus audit attention on them. The risk analysis provides a framework for assurance in performance auditing.

5.3.1 Audit risk analysis – The auditor should perform an analysis of the audit risks that impact on the auditee before undertaking specific audit procedures. Risk assessment is a subjective process. It is part of the professional judgment of the auditor and of the particular circumstances. It is the risk that the auditor may unknowingly fail to appropriately modify his opinion on financial statements that are materially misstated.

Audit risks are brought about by error and fraud:

- ◆ Error is an unintentional mistake resulting from omission, as when legitimate transactions and/or balances are excluded from the financial statements; or by commission, as when erroneous transactions and/or balances are included in the financial statements.
- ◆ Fraud is an intentional misstatement in the accounting records or supporting documents from which the financial statements are prepared. It is intended to deceive financial statement users or to conceal misappropriations.

The auditor has the responsibility to plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements, whether caused by error or fraud.

An error risk may arise from an error in principle, estimate, critical information processing, financial reporting process or disclosure.

Fraud risk involves manipulation, falsification of accounting records, or misrepresentation in the financial statements of events, transactions or other significant information, or misapplication of accounting principles or misappropriation of funds.

5.3.2 General Steps in the Conduct of RBA – RBA consists of four main phases starting with the identification and prioritization of risks, to the determination of residual risk, reduction of residual risk to acceptable level and the reporting to auditee of audit results. These are achieved through the following:

- ◆ Understand auditee operations to identify and prioritize risks
- ◆ Assess auditee management strategies and controls to determine residual audit risk
- ◆ Manage residual risk to reduce it to acceptable level
- ◆ Inform auditee of audit results through appropriate report

5.24 Advanced Auditing and Professional Ethics

Understanding auditee operations involves processes for reviewing and understanding the audited organization's risk management processes for its strategies, framework of operations, operational performance and information process framework, in order to identify and prioritize the error and fraud risks that impact the audit of financial statements. The environment in which the auditee operates, the information required to monitor changes in the environment, and the process or activities integral to the audited entity's success in meeting its objectives are the key factors to an understanding of agency risks. Likewise, a performance review of the audited entity's delivery of service by comparing expectations against actual results may also aid in understanding agency operations.

Assessment of management risk strategies and controls is the determination as to how controls within the auditee are designed. The role of internal audit in promoting a sound accounting system and internal control is recognized, thus the SAI should evaluate the effectiveness of internal audit to determine the extent to which reliance can be placed upon it in the conduct of substantive tests.

Management of residual risk requires the design and execution of a risk reduction approach that is efficient and effective to bring down residual audit risk to an acceptable level. This includes the design and execution of necessary audit procedures and substantive testing to obtain evidence in support of transactions and balances. More resources should be allocated to areas of high audit risks, which were earlier known through the analytical procedures undertaken.

The results of audit shall be communicated by the auditor to the audited entity. The auditor must immediately communicate to the auditee reportable conditions that have been observed even before completion of the audit, such as weaknesses in the internal control system, deficiencies in the design and operation of internal controls that affect the organization's ability to record, process, summarize and report financial data.

CASE STUDY

Using Analytical Procedures as Substantive Tests^Ψ

Great Champs, an independent, minor football team, competes in the Southern zone. The team finished in second place in 2006 with a good record. The Great Champs cumulative season attendance of 5,45,459 spectators set a new record high for the team, up from 4,90,000 in 2005. Bank-loan agreements require the Great Champs to submit audited financial statements annually to the bank. M/s. ABC & Co. has been the Great Champs' auditors for the past five years.

One of the major audit areas involved audit of ticket revenues. Those revenues reached nearly ₹ 10,88,0000 in 2005. In the prior years, the audit plan called for detailed testing of revenue accounts to gain assurance that reported ticket revenues were fairly stated.

^Ψ Adapted from a case study published in Auditing Cases : Buckless, Beasley, Glover, Prawitt (2000 edition), Prentice Hall, pg. 133.

Mr. Abhi, a new audit manager, just received the assignment to be manager on the 2006 audit. He had worked previously on the Great Champs prior-year audits as a staff auditor. When he learned that he would be managing the current-year engagement, he immediately thought back to all the hours of detailed testing of ticket sales he had performed in earlier years. One some of his other clients Mr. Abhi had been successful at redesigning the audit plans to make better use of analytical procedures as substantive tests. He is beginning to wonder if there was a more efficient way to gather substantive evidence related to ticket revenues on this audit engagement also.

In his first meeting with the management of Great Champs for the 2006 audit, Mr. Abhi learned that the Great Champs now use an outside company, M/s. Chicklets, to operate ticket gates for home games. The terms of the contract required M/s. Chicklets to collect ticket stubs so that they could later report total tickets collected per game. Although M/s. Chicklets did not break down the total ticket sales into the various price categories, Mr. Abhi thought there might be a way to develop an analytical procedure using the independently generated total ticket numbers and data from prior audits. To investigate this possibility, he asked a staff person to gather some information related to reported sales. The information that the staff person gathered from the records of the client, M/s. Chicklets and prior-year working papers is as follows :

2006 Park Attendance

Total park attendance	5,45,459
-----------------------	----------

2006 Number of Games

Weekday games	44
---------------	----

Weekend games	29
---------------	----

Information from prior-year audit working papers indicate that average per-game attendance for weekend games was 27% higher than average per-game attendance for weekday games.

2006 Per-Game Ticket Prices

Club seats	₹ 300
------------	-------

Box seats	₹ 200
-----------	-------

General seats : Adult :	₹ 150
-------------------------	-------

Child :	₹ 75
---------	------

Sales Mix	Weekday	Weekend
-----------	---------	---------

Club seats	30%	25%
------------	-----	-----

Box seats	40%	30%
-----------	-----	-----

General seats Adults	15%	25%
----------------------	-----	-----

Child	15%	20%
-------	-----	-----

Comparison of 2005 ticket prices to 2006 ticket prices reveals an average increase of 12% between the two years.

Information from prior-year audit working papers shows that sales mix has remained fairly constant over the past several years.

<i>2006 Promotion :</i>	<i>Number of Games</i>
<i>Weekday</i>	<i>7</i>
<i>Weekend</i>	<i>10</i>

Information from prior-year audit working papers shows that attendance generally increases by 10 percent when there is a promotion (e.g., free football cap, poster, or special entertainment).

Queries to the Readers

- i) Using the information provided, what expectation for ticket revenue for the year 2006 fiscal year should be developed by Mr. Abhi?*
- ii) How close would the Great Champs reported ticket revenue have to be to your expectation for you to consider reported ticket revenue reasonable or fairly stated?*
- iii) If reported ticket revenues are outside the "reasonable range" what could explain the difference?*
- iv) If the engagement team decides to use analytical procedures for the Great Champs audit then how will the audit plan differ from prior years?*