Department of Commerce

University of Calcutta

Study Material

Cum

Lecture Notes

Only for the Students of M.Com. (Semester IV)-2020

University of Calcutta

(Internal Circulation)

Dear Students,

Hope you, your parents and other family members are safe and secured. We are going through a world-wide crisis that seriously affects not only the normal life and economy but also the teaching-learning process of our University and our department is not an exception.

As the lock-down is continuing and it is not possible to reach you face to face class room teaching. Keeping in mind the present situation, our esteemed teachers are trying their level best to reach you through providing study material cum lecture notes of different subjects. This material is not an exhaustive one though it is an indicative so that you can understand different topics of different subjects. We believe that it is not the alternative of direct teaching learning.

It is a gentle request you to circulate this material only to your friends those who are studying in Semester IV (2020).

Stay safe and stay home.

Best wishes.

For

Semester-IV

[Additional Materials]

STANDARDS ON AUDITING

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STANDARDS ON AUDITING

- Background
- Definition
- Scope
- Objectives and Significance
- Procedure of Issuing Standards
- Structure of the Standards Issued by the AASB
- Role of the IAASB

Background

- The International Federation of Accountants (IFAC) established in 1977
- The purpose of establishing IFAC was to bring harmony in the profession of accounting on international level
- In pursuing this mission, IFAC has established an International Auditing Practices Committee (IAPC) to formulate International Auditing Guidelines (IAG) of high quality auditing standards for global use.
- Later these guidelines converted as International standards on Auditing.
- The Institute of Chartered Accountants of India is founder member of the IFAC.

Background

- The ICAI constituted Auditing Practices Committee (APC) on 17th September 1982 to issue Statements on Standard Auditing Practices (SAPs) and Guidance Notes (GNs) to replace various chapters of the old Statement on Auditing Practices (SAPs) issued in 1964.
- In 2002, the APC has converted to Auditing and Assurance Standards Board (AASB) by the Council of the Institute and nomenclature of SAP changed to Auditing and Assurance Standards (AASs).
- The Standards on Auditing (SA) are now completely in a new format of writing in line with that adopted by the International Auditing and Assurance Standards Board (IAASB).

Definition of SA

- Standard on Auditing (SA) is a set of systematic guidelines used by auditors during the course of audit conducted in different audit environment.
- It is guidelines prescribed by the professional bodies of accountants and it provides principles and techniques of auditing which help auditors performing his duties in the most efficient and effective manner.
- Standard on Auditing (SA) describes the way in which the audit tasks should be conducted to maintain audit quality.
- It provides better assurance to the concerned regulatory authority and leads to improved system and procedures for the business as a whole.
- It provides reasonable professional satisfaction to the auditor and acts as a guide to the successor. Thus, it helps in better presentation of information and their reliability.

Scope of the SA

The scopes of Standards on Auditing (SA) are discussed here under:

1. SAs are applicable in an independent audit of any type of entity e.g. profit oriented or non-profit oriented irrespective of its legal form or size etc.
2. When an independent examination of financial statements is conducted by the auditor with a view to express an opinion thereupon, the auditor may find very useful.
3. SA may also be applied to other related functions of auditors.
4. The applicability of a specific standard is made clear in its introductory paragraph of the SA itself.
5. The ICAI issued pronouncements on accepted auditing practices for the guidance of its members.
6. It is not only related with financial audit but also relates with propriety audit, internal audit, peer review etc.

Objectives and Significance

Objectives and Significance of the Standards on Auditing (SA) are discussed in the following points:

1. **Codification of Auditing Practice:** Standards on Auditing attempts to codify auditing practices expected to be applied when conducting an audit.
2. **Ensuring Effectiveness:** The objective of prescribing guidelines for conduction of the audit is to ensure sound and effective auditing practices by auditors.
3. **Guidance for Auditor:** Standard on Auditing (SA) is guidance in the hands of auditors. It helps them to perform their professional services. It is general guideline given by the professional bodies and it indicates principles and techniques for auditing. It is followed by auditors during the course of audit conducted in different audit environment.
4. **Reducing Audit Risk:** Standard on Auditing (SA) also helps auditors in minimising the probability of continuing with material misstatements in the financial statements. The auditor can also defend himself against any allegation of negligence by stating the fact that he has conducted the audit according to standards.

Objectives and Significance

5. **Restoring Public Confidence:** In recent times there were widespread scams and accounting standards which had taken away the confidence of general public from auditing profession. The Standard on Auditing (SA) would restore the public confidence in auditing profession by enhancing the audit quality.
6. **Check on Accounting Scandals:** Ambiguity, confusion and inexactness in the meaning and interpretation of auditing terminology generate accounting scandals leading to business failure. Therefore, standardization of auditing terminology is required to prevent misuse of auditing terminology in turn of which accounting scandals will minimise substantially.
7. **Uniformity in Accounts:** Uniform presentation of accounts is needed in order to achieve the objective of global accounting harmonization. Auditing is not a very exact science; it is the subject of interpretation. Uniformity in concepts, conventions and practices is needed.

Objectives and Significance

8. **Investors' Risk Reduction:** In case of any discrepancy between what the audit report exhibits and the real financial position of the entity it will have a devastating impact on the risk perception of the investors. Then the cost of capital will rise and entity will find it difficult to raise finance. It is expected that Standard on Auditing (SA) can play significant role in the reducing the risk perception of the investors.
9. **Auditor's Responsibility:** Standard on Auditing (SA) helps auditors to get the idea about their responsibility in job they perform. They will always remain careful while performing audit work and ultimately ensure that they have followed the Standard on Auditing (SA). Hence their responsibility will be defined by their scope of the work only.

Procedure of Issuing Standards by the AASB

Mainly the following procedure is adopted in the process of issuing Standard on Auditing (SA):

1. **Searching Broader Areas:**

   First of all, Auditing and Assurance Standards Board (AASB) decides the broad areas where the Standard on Auditing (SA) is needed. Then, the priority in selection of those areas is decided.
2. **Constituting Sturdy Group:**

   The study group(s) comprising a cross-section of the members of the institute (ICAI) is formed to consider specific issues. These study groups assist the AASB in preparation of standards on auditing.
3. **Preparation of Exposure Draft:**

   An exposure draft (ED) of the proposed Standard on Auditing (SA) is prepared by the committee on the basis of the work of the study groups and it is issued for comments by members of the institute.

Procedure of Issuing Standards by the AASB

4. **Finalization of Exposure Draft by AASB:** The draft of the proposed Standard on Auditing is finalized by the AASB after taking into consideration of the comments received and it is submitted to the council of the institute for its consideration.
5. **Issue of Standard on Auditing:** The council of the ICAI considers the final draft of the proposed Standard on Auditing and modifies the same in consultation with the AASB, if necessary. Then the Standard on Auditing (SA) is issued under the authority of the Council.

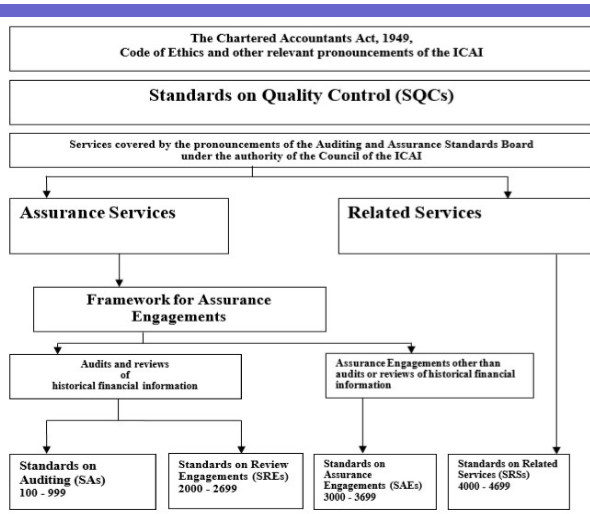
Standards Issued by the AASB

- As a founder member of the IFAC, the ICAI is to propagate the pronouncements of the IAASB to contribute towards international harmonization and acceptance of standards issued by the IAASB.
- The Auditing and Assurance Standard Board (AASB) formed by the ICAI is responsible for the formulation and issuing of Standard on Auditing (SA) in India.
- The ICAI develops and promulgates technical standards and other professional literature for the development of the accounting and auditing services.

Standards Issued by the AASB

- The following Standards issued by the Auditing and Assurance Standards Board (AASB) under the authority of the Council are collectively known as the Engagement Standards:
  - **Standards on Auditing (SAs),** to be applied in the audit of historical financial information.
  - **Standards on Review Engagements (SREs),** to be applied in the review of historical financial information.
  - **Standards on Assurance Engagements (SAEs),** to be applied in assurance engagements, dealing with subject matters other than historical financial information.
  - **Standards on Related Services (SRSs),** to be applied to engagements involving application of agreed-upon procedures to information, compilation engagements and other related services engagements, as may be specified by the ICAI.
- Standards on Quality Control **(SQCs)** issued by the AASB under the authority of the Council, are to be applied for all services covered by the Engagement Standards as above.

Structure of the Standards Issued by the AASB



Role of the IAASB

- The International Auditing and Assurance Standards Board (IAASB) is an independent standard-setting body that serves the public interest by setting high-quality international standards for auditing, quality control, review, other assurance, and related services, and by facilitating the convergence of international and national standards.
- The IAASB enhances the quality and uniformity of practice throughout the world and strengthens public confidence in the global auditing and assurance profession.
- The IAASB's efforts are focused on development, adoption and implementation of international standards addressing audit, quality control, review, other assurance, and related services engagements.

Role of the IAASB

- The IAASB's medium-term strategy addresses the following three main themes in the public interest:
  - Supporting global financial stability;
  - Enhancing the role, relevance and quality of assurance and related services in an evolving world; and
  - Facilitating adoption and implementation of the standards.
- The IAASB follows a rigorous due process in developing its pronouncements.

Role of the IAASB

- Input is obtained from a wide range of stakeholders including the IAASB's Consultative Advisory Group, national auditing standard setters, IFAC member bodies and their members, regulatory and oversight bodies, firms, governmental agencies, investors, preparers, and the general public.
- Exposure Drafts of proposed pronouncements are posted on the website and comments are invited; final pronouncements are accompanied by a Basic for Conclusions with respect to comments received.

Role of the IAASB

- The Public Interest Oversight Board (PIOB) oversees the work of the IAASB and its CAG to ensure that the activities of the IAASB follow due process and are responsive to the public interest.
- The IAASB is dedicated to operate as transparently as possible.
- The IAASB meetings are open to the public and meeting agenda, agenda papers and meeting highlights are posted on the website.
- In addition, the website includes project histories, audio recordings of the IAASB meetings, IAASB Exposure Drafts and all comments made on those drafts by different stakeholders.

Multiple Choice Questions

1. The ICAI is the ____________________ of the International Federation of Accountants (IFAC).
   - A. Invited member
   - B. Temporary member
   - C. **Founder member**
   - D. Casual member
2. The ICAI constituted Auditing Practices Committee (APC) on
   - A. 7th October 1977
   - B. **17th September 1982**
   - C. 27th November 1992
   - D. 15th December 1999

Multiple Choice Questions

3. Standard on Auditing (SA) describes the way in which the audit tasks should be conducted to maintain
   - A. Peaceful environment
   - B. Green environment
   - C. Social security
   - D. **Audit quality**
4. Standard on Auditing provides reasonable professional satisfaction to the auditor and acts as a guide to the
   - A. **Successor**
   - B. Predecessor
   - C. Precursor
   - D. Inventor

Questions & References

Descriptive Questions:

1. What do you mean by 'Standards on Auditing (SA)'? Discuss different objectives and significance of Standards on Auditing.
2. Discuss the scope of Standards on Auditing (SA).
3. Discuss the procedure adopted by the AASB for the formulation of Standards on Auditing (SA).
4. What are the major roles of the IAASB in harmonizing the international auditing practices?

References:

- Basu, Dr. B. K, An Insight into Auditing – a multidimensional approach, Basushree Book Stall, 2004
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- Ghosh, Dr. Jayanta, Contemporary Auditing and Assurance, The Elegant Publications, 2017
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SATY HOME, STAY SAFE !

PAPER: CC.403: AUDIGING AND ASSURANCE SERVICES

MODULE-I

UNIT/CHAPTER 4: INTERNAL CONTROL SYSTEM AND RISK ASSESSMENT

(CMA DR. SAMYABRATA DAS)

STUDY NOTES FOR M.COM STUDENTS OF THE UNIVERSITY OF CALCUTTA

[NOTE: Students are requested to consult the references mentioned at the end.]

INTERNAL CONTROL SYSTEM

Meaning of Internal Control System

It comprises the whole system of controls, financial or otherwise, established by the management for conduct of business. It includes internal check and internal audit besides other controls.

SA-315, "Identifying and Assessing the Risk of Material Misstatement Through Understanding the Entity and its Environment", defines internal control as "the process designed, implemented and maintained by those charged with governance, management and other personnel to provide reasonable assurance about the achievement of an entity's objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations, safeguarding of assets, and compliance with applicable laws and regulations."

Objectives / Purposes of Internal Control System

(i) To examine whether the transactions are executed as per the management's general or specific authorization;

(ii) To determine accuracy and completeness of records and. timely preparation of reliable financial information;

(iii) To ascertain whether assets are safeguarded from unauthorized access, use or disposition; and

(iv) To compare recorded assets with the existing ones at reasonable intervals and taking appropriate actions in case differences are discovered;

(v) To facilitate prevention and detection of errors and frauds;

(vi) To examine whether the policies and procedures laid down by the management are adhered to.

Limitations of Internal Control System

(i) Reasonable assurance: Even an effective internal control can provide an entity with only reasonable assurance about achieving the entity's financial reporting objectives.

(ii) Human error: In reality, human judgment in decision-making can be faulty because of human error. For example, there may be an error in the design of control.

(iii) Lack of understanding the purpose: The person responsible for reviewing the control may not understand the basic purpose of such control. This may lead to ineffective utilisation of information and taking a wrong course of action.

(iv) Collusion: Two or more people who are intended by a system of control to keep watch over each other could instead collude to circumvent the system. Someone on the management team could override any aspect of a control system for his personal advantage.

(v) Unusual transactions: Usually controls are made for usual or known transactions. As such, it becomes difficult to control unusual transactions.

(vi) Cost factor: Cost of implementation of control systems may be greater than its benefits. Therefore, it often becomes difficult for management to implement the best control systems.

(vii) Abuse of authority: There remains the possibility that the person responsible for exercising control may abuse that authority.

(viii) Changes in the environment: Established procedures may become ineffective due to changes in the environment.

(ix) Judgements by management: In designing and implementing controls, management may make judgments on the nature and extent of the controls it chooses to implement, and the nature and extent of the risks it chooses to assume.

(x) Limitations in the case of small entities: Smaller entities often have fewer employees due to which segregation of duties is not practicable.

Can a satisfactory control environment act as an absolute deterrent to fraud?

There is no doubt that the existence of a satisfactory control environment can be a positive factor when the auditor assesses the risks of material misstatement. It may help reduce the risk of fraud. Still, a satisfactory control environment is not an absolute deterrent to fraud. On the contrary, deficiencies in the control environment may undermine the effectiveness of controls, especially in relation to fraud. For example, the failure on the part of the management to commit adequate resources to address IT security risks may adversely affect internal control by allowing improper changes to be made to computer programs or to data, or unauthorized transactions to be processed. As explained in SA 330, the control environment also influences the nature, timing, and extent of the auditor's further procedures. The control environment in itself does not prevent or detect and correct a material misstatement. It may, however, influence the auditor's evaluation of the effectiveness of other controls (for example, the monitoring of controls and the operation of specific control activities) and thereby, the auditor's assessment of the risks of material misstatement.

INTERNAL CHECK

It is a system of allocation of responsibility, division of work, and methods of recording transactions, whereby the work of an employee is checked continuously by another. Its objective is to ensure that no one employee has exclusive control over any transaction or group of transactions and their recording in the books. Here, the work of the subordinates is checked by the immediate supervisors to verify that the work is carried out according to the policies and guidelines of the organisation. Internal checks are carried out on a day-to-day basis.

Internal Check is an integral function of the internal control system. It is an arrangement of duties of the staff members in such a way that the work performed by one person is automatically and independently checked by the other.

Objectives of Internal Check

(1) To keep moral pressure over staff;

(2) To minimize the chances of errors and frauds;

(3) To ensure the supply of adequate and reliable accounting information;

(4) To divide the work in such a way that no transaction is left unrecorded;

(5) To protect the business from carelessness and inefficiency; and

(6) To fix the responsibility of every employee according to the division of work.

DIFFERENCES BETWEEN INTERNAL CHECK AND INTERNAL CONTROL

Points of Difference	Internal Check	Internal Control
Meaning	It is an arrangement of duties of the staff members in such a way that the work performed by one person is automatically and independently checked by the other.	It comprises the whole system of controls, financial or otherwise, established by the management for conduct of business.
Scope	It is a part of internal control. As such, its scope is narrow.	The scope of internal control is broad.
Objective	The main objective of internal	The main objective of internal

	check is to prevent errors and fraud.	is to ensure compliance of various policies and procedures.
Cost	Since it is a part of internal control it does not add to the cost.	It may prove costly for small organisations because more number of employees are engaged.

INTERNAL AUDIT

As defined in the scope of the Standards on Internal Audit, Internal Audit means "An independent management function, which involves a continuous and critical appraisal of the functioning of an entity with a view to suggest improvements thereto and add value to and strengthen the overall governance mechanism of the entity, including the entity's strategic risk management and internal control system".

Internal audit is defined as an unbiased, rational assurance and consulting function, developed by the management, to keep a check on the activities of the organization. It involves regular and critical analysis of the functions of an organization for the purpose of recommending improvements.

Internal Audit Function is an appraisal activity established or provided as a service to the entity. Its function includes, amongst other things, examining, evaluating and monitoring the adequacy and effectiveness of internal control.

Who can be appointed as Internal Auditor?

Section 138 of the Companies Act 2013 describes that a **Chartered Accountant, a Cost Accountant or any other professional** as may be decided by the Board can be appointed as an Internal Auditor. Thus we can clearly see that the Companies Act has **widened the scope of professionals** in this segment. So with the Companies Act 2013, professionals such as Chartered Accountants, Cost Accountants, **Company Secretaries, Advocates and the like** can be appointed as Internal Auditors. The internal auditor **may or may not be an employee of the company**.

Objectives and Scope of Internal Audit Functions

As per **SA-610, "Using the Work of an Internal Auditor",** the objectives of internal audit functions vary widely and depend on the size and structure of the entity and the requirements of management and, where applicable, those charged with governance. The objectives and scope of internal audit functions typically include assurance and consulting activities designed to evaluate and improve the effectiveness of the entity's governance processes, risk management and internal control such as the following:

(1) Activities Relating to Governance: The internal audit function may assess the governance process in its accomplishment of objectives on ethics and values, performance management and accountability, communicating risk and control information to appropriate areas of the organization and effectiveness of communication among those charged with governance, external and internal auditors, and management.

(2) Activities Relating to Risk Management: The internal audit function may assist the entity by identifying and evaluating significant exposures to risk and contributing to the improvement of risk management and internal control (including effectiveness of the financial reporting process).

(3) Activities Relating to Internal Control:

(i) **Evaluation of internal control:** The internal audit function may be assigned specific responsibility for reviewing controls, evaluating their operation and recommending improvements thereto.

(ii) **Examination of financial and operating information:** The internal audit function may be assigned to review the means used to identify, recognize, measure, classify and report financial and operating information, and to make a specific inquiry into individual items, including detailed testing of transactions, balances and procedures.

(iii) **Review of operating activities:** The internal audit function may be assigned to review the economy, efficiency and effectiveness of operating activities, including non-financial activities of an entity.

(iv) **Review of compliance with laws and regulations**: The internal audit function may be assigned to review compliance with laws, regulations and other external requirements, and with management policies and directives and other internal requirements.

DIFFERENCES BETWEEN INTERNAL CHECK AND INTERNAL AUDIT

Points of Difference	Internal Check	Internal Audit
Meaning	It is an arrangement of duties of the staff members in such a way that the work performed by one person is automatically and independently checked by the other.	**It** is an appraisal activity and an independent management function which involves a continuous and critical appraisal of the functioning of an entity with a view to suggest improvements thereto.
Device	It is a device for doing the work.	It is a device for monitoring the

		work.
Separate staff	It does not require separate staff.	It requires separate staff employed only for this purpose.
Purpose / Object	The purpose of internal check is to prevent or minimize the possibilities of errors, fraud or irregularities.	The purpose of internal audit is to detect errors and fraud which have already been committed.
Scope of work	It is limited.	It is comparatively wide.

EVALUATION OF INTERNAL CONTROL BY THE AUDITOR

So far as the auditor is concerned, the examination and evaluation of the internal control system is a crucial part of the overall audit programme. The auditor needs reasonable assurance that (i) the accounting system is adequate, and (ii) all the accounting information which should be recorded has been recorded. Internal control normally contributes to such assurance. The auditor should gain an understanding of the accounting system and related internal controls. He should study and evaluate the operations of these internal controls upon which he wishes to rely in determining the nature, timing and extent of other audit procedures.

Benefits of Evaluation of Internal Control to the Auditor

The review of internal controls will enable the auditor to know:

(i) whether errors and frauds are likely to be located in the ordinary course of operations of the business;

(ii) whether a satisfactory internal control system as planned by the management is in use and operating;

(iii) whether an effective internal auditing department is operating;

(iv) whether any administrative control has a bearing on his work (for example, if the control over worker recruitment and enrolment is weak, there is a likelihood of dummy names being included in the wages sheet and this is relevant for the auditor);

(v) whether the controls sufficiently safeguard the assets;

(vi) how far and how adequately the management is discharging its function concerning correct recording of transactions;

(vii) how reliable the reports, records and the certificates to the management can be;

(viii) the extent and the depth of the examination that he needs to carry out in the different areas of accounting;

(ix) what would be appropriate audit technique and the audit procedure in the given circumstances;

(x) what are the areas where control is weak and where it is excessive; and

(xi) whether some worthwhile suggestions can be given to improve the control system.

EVALUATION OF INTERNAL CONTROL: METHODS

To facilitate the accumulation of the information necessary for the proper review and evaluation of internal controls, the auditor can use one of the following to help him to know and assimilate the system and evaluate the same:

(i) Narrative record;

(ii) Check List;

(iii) Questionnaire; and

(iv) Flow chart.

The Narrative Record

- ✓ This is a **complete and exhaustive description** of the system as found in operation by the auditor.
- ✓ **Actual testing and observation** are necessary before such a record can be developed.
- ✓ It may be recommended in cases **where no formal control system is in operation** and would be **more suited to small business**.
- ✓ The basic disadvantages of narrative records are: (i) To comprehend the system in operation is quite difficult. (ii) It is difficult to identify weaknesses or gaps in the system. (iii) Detailed observation is needed. So it is time consuming.

Check List

- ✓ This is a **series of instructions and/or questions** which a member of the auditing staff must follow and/or answer.
- ✓ The instructions and questions are framed according to the **desirable elements** of control.
- ✓ When he completes instruction, he initials the space against the instruction.
- ✓ Answers to the check list instructions are usually **Yes, No or Not Applicable**.
- ✓ The complete check list is studied by the Principal/Manager/Senior to ascertain the existence of internal control and evaluate its implementation and efficiency.

Internal Control Questionnaire

- ✓ It refers to a **comprehensive series of questions** in a logical and sequential order prepared by the auditor concerning internal control.
- ✓ In the questionnaire, generally, questions are so framed that a **'Yes' answer denotes satisfactory position and a 'No' answer suggests weakness**. Provision is made for an explanation or further details of 'No' answers. In respect of questions not relevant to the business, 'Not Applicable' reply is given.
- ✓ The questionnaire is usually issued to the client and the client is requested to get it filled by the concerned executives and employees.
- ✓ If on a perusal of the answers, inconsistencies or apparent incongruities are noticed, the matter is further discussed by auditor's staff with the client's employees for a clear picture.
- ✓ The concerned auditor then prepares a report of deficiencies and sends it to the management along with recommendations for improvement.
- ✓ This is the **most widely used form** for collecting information about the existence, operation and efficiency of internal control in an organisation.

Flow Chart

- ✓ It is a **graphic presentation of each part of the company's system of internal control**.
- ✓ A flow chart is considered to be the **most concise way** of recording the auditor's understanding and evaluation of the internal control system in the correct perspective.
- ✓ It **minimises** the amount of **narrative explanation**.
- ✓ It gives **bird's eye view** of the entire process of manufacturing, trading and administration.
- ✓ The **flow** of transactions through various stages can be **easily spotted** and improvements can be suggested.

TEST OF CONTROLS

Test of controls include tests of elements of the control environment where strengths in the control environment are used by auditors to reduce control risk.

Why are tests of control performed?

Tests of control are performed to obtain audit evidence about the effectiveness of:

(a) **Design** of the accounting and internal control systems, that is, whether they are suitably designed to prevent, correct and detect material misstatements or not; and

(b) **Operations** of the internal control throughout the period.

What do tests of control include?

Test of controls may include:

- **Inspection** of documents supporting transactions and other events to gain audit evidence that internal controls have operated properly (e.g., verifying that a transaction has been authorised).
- **Inquiries** about, and observation of, internal controls which leave no audit trail (e.g., determining who performs each function and not merely who is supposed to perform it).
- **Re-performance** of internal controls (e.g., reconciliation of bank accounts to ensure that they were correctly performed by the entity).
- **Testing** of internal control operating on specific computerised applications or over the overall information technology function (e.g., access or program change controls).

Matters to be considered by the auditor in determining the extent of tests of control

The auditor should consider the following matters in determining the extent of tests of control:

(1) The **frequency of the performance** of the control by the entity during the period;

(2) The **length of time** during the audit period that the auditor is **relying** on the operating effectiveness of the control;

(3) The expected **rate of deviation** from the control;

(4) The **relevance and reliability** of the audit evidence to be obtained regarding the operating effectiveness of the control at the assertion level.

RELATIONSHIP BETWEEN INTERNAL AUDITOR AND STATUTORY AUDITOR

Internal and statutory/external audit should ensure appropriate and **regular communication and sharing of information**. A **constructive relationship** between the two can be of immense benefit to the organisations. Nevertheless, it is essential that the two assurance functions maintain **clear boundaries**, as well as ensure they preserve their **independence and objectivity**.

Internal and statutory audit are **complementary functions** and both are essential for the effective governance of an organisation. However, internal audit is distinct from statutory audit and **both functions have their value and expertise**. They perform very different roles and should report separately to the board/audit committee.

Despite the need to preserve their independence and objectivity, internal and statutory audit should maintain a close, constructive relationship. This is to ensure their work is coordinated and there is an efficient use of resources.

The aim should be to achieve **mutual recognition and respect**, leading to a joint improvement in performance and the avoidance of unnecessary overlapping of work.

Statutory/External audit's reliance on the work of internal audit

As a general principle**, external/statutory auditors should be able to use evidence and reports obtained from the internal audit function** to assist them in their audit work, inform their understanding of the organisation and its control environment and help identify and assess the risks of material misstatement. However, **external auditors should not place absolute reliance on such evidence**. They should ensure they maintain their own **independence, objectivity, and professional scepticism** in drawing conclusions from it.

The role of the internal audit function within an entity is determined by management and its prime objective differs from that of the external auditor who is appointed to report independently on financial information. Nevertheless, some of the means of achieving their respective objectives are often similar and thus **much of the work of the internal auditor may be useful to the external auditor in determining the nature, timing and extent of his procedures**.

The external auditor should, as part of his audit, evaluate the internal audit function to the extent he considers that it will be relevant in determining the nature, timing and extent of his compliance and substantive procedures. In evaluating the effect of the internal audit function, the statutory auditor should consider the **organizational status** of the internal auditor, the **scope of the function**, existence of **operational responsibility**, **constraints or limitations placed by management**, his **technical competence**, and the **level of professional care** exercised in conducting internal audit. Depending upon such evaluation, the external auditor may be able to adopt less extensive procedures than would otherwise be required. By its very nature, the internal audit function cannot be expected to have the same degree of independence as is essential when the external auditor expresses his opinion on the financial information. **The report of the external auditors is his sole responsibility and that responsibility is not only by any means reduced because of the reliance he places on the internal auditors work.**

PROFESSIONAL SCEPTICISM/ PROFESSIONAL SKEPTICISM

Concept / Meaning

"Professional scepticism" means: ·

- Not accepting the audit evidence (voucher) one has gathered at face value
- Continuing to pursue all avenues of inquiry on the topic at hand
- Critically assessing evidence without being overly suspicious or cynical

According to International Auditing and Assurance Standards Board (IAASB), "Professional scepticism" means "an attitude that includes a questioning mind, being alert to conditions which may indicate possible misstatement due to error or fraud, and a critical assessment of evidence."

Professional skepticism includes being alert to, for example:

- Audit evidence that contradicts other audit evidence obtained.
- Information that brings into question the reliability of documents and responses to inquiries to be used as audit evidence.
- Conditions that may indicate possible fraud.
- Circumstances that suggest the need for audit procedures in addition to those required by the SAs.

Professional scepticism is closely related to fundamental **ethical considerations** of auditor **objectivity and independence**. Professional scepticism is also linked to the application of **professional judgment** by the auditor. **An audit performed without an attitude of professional scepticism is not likely to be a high-quality audit**. Professional scepticism should ensure that the auditor does not (i) neglect unusual circumstances, (ii) oversimplify the results from audit procedures, or (iii) adopt inappropriate assumptions when determining the audit response required addressing identified risks.

AUDIT RISK

Audit risk means the risk that the auditor gives an inappropriate audit opinion when the financial statements are materially misstated. For example, an auditor may give an unqualified opinion on financial statements without knowing that they are materially misstated.

Audit risk is a function of the risks of material misstatement and detection risk.

From the above, it is clear that

Audit Risk = Risk of Material Misstatement X Detection Risk----- -(1)

Again, Risk of Material Misstatement= Inherent Risk X Control Risk----- -(2)

From (1) and (2), we arrive at

Audit Risk = Inherent Risk X Control Risk X Detection Risk

Components of Audit Risk

Audit risk is a function of the risks of material misstatement and detection risk.

(1) Risk of material misstatement

It may be defined as the risk that the financial statements are materially misstated prior to audit. This consists of two components, described as follows at the assertion level:

(a) Inherent risk

It is the susceptibility of an assertion about a class of transaction, account balance or disclosure to a misstatement that could be material, either individually or when aggregated with other misstatements, before consideration of any related controls.

Inherent risk may be **higher for complex calculations**. Cash is more susceptible to theft than an inventory of coal. **External circumstances giving rise to business risks** may also influence inherent risk. For example, technological developments might make a particular product obsolete. Inherent risk factors are considered while designing tests of controls and substantive procedures.

(b) Control risk

It is the risk that the internal controls implemented by the entity **will not prevent, detect or correct** a misstatement in a class of transaction, account balance or disclosure and could be material, either individually or when aggregated with other misstatements.

Control risk is a function of the effectiveness of the design, implementation and maintenance of internal control by management.

However, **internal control can only reduce but not eliminate the risks of material misstatement in the financial statements**. This is because of the inherent limitations of internal control.

The assessment of the risks of material misstatement may be expressed in quantitative terms, such as in percentages, or non-quantitative terms. In any case, the need for the auditor to make appropriate risk assessments is more important than the different approaches by which they may be made.

The auditor **cannot control the risks of material misstatement** but he can **only assess** such risk because it is the risk prior to the audit and accordingly he will design his substantive procedures.

Detection risk

It is the risk that the **procedures performed** by the auditor to reduce audit risk to an acceptably low level **will not detect** a misstatement that exists and that could be material, either individually or when aggregated with other misstatements.

The auditor **can control detection risk** by performing more or fewer audit procedures because it is the **risk during audit.**

Inter-relationship between components of audit risk

There exists an **inverse relationship** between the risks of material misstatement and detection risks. When the risk of material misstatement (as assessed by the auditor) is high he will perform more audit procedures. This will reduce detection risk. As a result, the overall audit risk is also reduced to an acceptably low level.

Assessment of Risks - Matter of Professional Judgement

The assessment of risks is based on audit procedures to obtain information necessary for that purpose and evidence obtained throughout the audit. **The assessment of risks is a matter of professional judgment, rather than a matter capable of precise measurement**.

What is not included in Audit Risk?

(i) Audit risk does not include the **risk of giving a modified opinion** when financial statements are not materially misstated. This risk is ordinarily insignificant.

(ii) Further, audit risk is a technical term related to the process of auditing; it does not refer to the auditor’s **business risks** such as loss from litigation, adverse publicity, or other events arising in connection with the audit of financial statements.

RELATIONSHIP BETWEEN AUDIT RISK AND MATERIALITY

Auditors should consider materiality and its relationship with audit risk when conducting an audit. A matter is material if its omission or misstatement would reasonably influence the decisions of a user of the financial statements. Since materiality has both qualitative and quantitative aspects, it is not capable of any general mathematical definition.

The concept of materiality recognizes that some matters, either individually or in the aggregate, are important for fair presentation of financial statements in conformity with generally accepted accounting principles, while other matters are not important. The assessment of what is material is a matter of professional judgement.

There is an **inverse relationship** between materiality and the level of audit risk. It implies that the higher the materiality level, the lower the audit risk and vice versa. Auditors take into account the inverse relationship between materiality and audit risk when determining the nature, timing and extent of audit procedures.

The auditors' assessment of materiality and audit risk when evaluating the results of audit procedures may be different from that at the time of initially planning the engagement. This could be because of a change in circumstances or because of a change in the auditors' knowledge as a result of the audit.

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MODEL QUESTIONS

CHAPTER 3

1) What is auditor's report? Enumerate the essential of a good audit report.

2) Discuss the basic elements of the auditor's report as prescribed in the relevant Standard on Auditing (SA).

3) Explain the following:

(a) "Emphasis of Matter" Paragraph in the auditor's report

(b) "Other Matter" Paragraph in the auditor's report

Fill in the blanks:

Nature of Matter Giving Rise to the Modification	Auditor's Judgment about the Pervasiveness of the Effects or Possible Effects on the Financial Statements	
	Material but Not Pervasive	Material and Pervasive
Financial statements Are materially misstated	?	?
Inability to obtain sufficient appropriate audit evidence	?	?

4) Describe the matters which are required to be included in the auditor's report as per the provisions of the Companies Act 2013.

5) Which companies are kept outside the purview of CARO 2016? How would you deal with the following matters as per CARO 2016?

(a) Fixed Assets

(b) Nidhi Company

(c) Related Party Transactions

6) How would you deal with the following matters as per CARO 2016?

(a) Inventory

(b) Deposits

(c) Managerial Remuneration

7) "A practitioner is not expected to reduce the engagement risk to zero because there are inherent limitations attached to the procedures which a practitioner may perform concerning the issuance of a report or certificate for special purposes.". ---What are those inherent limitations? What should be the objectives of the practitioner in conducting an assurance engagement?

8) Write short notes on

(a) Independence of an Auditor

(b) Audit Reports and Certificates for special purposes

9) Discuss different types of auditor's independence. Explain different threats to auditor's independence.

10) Explain the factors impairing the auditor's independence. Discuss auditor's independence in the Indian context.

MCQ

1) As per Section --------, the auditor's report shall state whether, in his opinion, the financial statements comply with the accounting standards.

(a) 143(3)(c)

(b) 143(3)(d)

(c) 143(3)(e)

(d) 143(3)(f)

2) ------- threats occur when the auditor promotes or is perceived to promote a client's opinion to a point where people may believe that objectivity is getting compromised.

(a) Self-interest

(b) Self-review

(c) Familiarity

(d) Advocacy

3) If the auditor is facing threat from the client to be dismissed if he refuses to act as per their wishes, it shall give rise to ------ threat.

(a) Self-interest

(b) Advocacy

(c) Intimidation

(d) Familiarity

4) If the auditor is having long association with client it will give rise to ____________ threat.

(a) Self- review

(b) Advocacy

(c) Familiarity

(d) Self-interest

(5) For private sector listed companies, the auditor shall rotate every ------ year if the auditor is an individual.

(a) Three

(b) Four

(c) Five

(d) Six

(6) When financial statements are materially misstated and the auditor thinks that its effect on financial statements is material and pervasive, he will submit a/an ------- report.

(a) Unqualified

(b) Qualified

(c) Adverse

(d) Disclaimer

(7) When financial statements are materially misstated and the auditor thinks that its effect on financial statements is material but not pervasive, he will submit a/an ------- report.

(a) Unqualified

(b) Qualified

(c) Adverse

(d) Disclaimer

(8) When the auditor is unable to obtain sufficient appropriate audit evidence and he thinks that its effect on financial statements is material and pervasive, he will submit a/an ------- report.

(a) Unqualified

(b) Qualified

(c) Adverse

(d) Disclaimer

(9) SA ------------ deals with "Modifications to the Opinion in the Independent Auditor's Report".

(a) 700

(b) 705

(c) 706

(d) 711

(10) For audits of complete sets of general purpose financial statements of listed entities, the auditor shall communicate key audit matters in the auditor's report in accordance with SA ---.

(a) 701

(b) 705

(c) 706

(d) 805

(11) Auditor has to report on........ number of matters under CARO 2016.

(a) 16

(b) 14

(c) 12

(d) 15

(12) CARO 2016 applies to which of the following company

(a) Banking company

(b) Insurance company

(c) Foreign company

(d) Licensed company u/s 8

(13) Which of the following are to be included mandatorily in the audit report?

(a) Whether all the information and explanation relevant for the audit has been obtained.

(b) Whether a personal expenditure is debited to revenue account.

(c) Whether the loans and advances given are unsecured and prejudicial to the interest of the company.

(d) Whether the book entries are prejudicial.

CHAPTER 4

(1) What is "Internal Control System"? Mention any six purposes/objectives of Internal Control System within an organisation. State the limitations of Internal Control System.

(2) Can a satisfactory control environment act as an absolute deterrent to fraud? What do you mean by "Internal Check"? State the objectives of Internal Check.

(3) What is "Internal Audit"? Who can be appointed as Internal Auditor? Describe the objectives and scope of internal audit functions.

(4) Distinguish between (a) Internal Check and Internal Control, (b) Internal Check and Internal Audit.

(5) Explain the benefits of evaluation of internal control to the auditor. Name four methods of evaluation of internal control.

(6) Write short notes on the following:

(a) Narrative record (b) Check List (c) Internal Control Questionnaire

(7) Explain the methods for evaluation of internal control by the auditor.

(8) What do you mean by "Test of Control"? Why are tests of control performed? What do tests of control include? What matters are required to be considered by the auditor in determining the extent of tests of control?

(9) Explain the relationship between Internal Auditor and Statutory Auditor. Can Statutory Auditor rely on the work of Internal Auditor?

(10) What do you mean by "Audit Risk"? Describe the components of audit risk. How are the audit risks related?

(11) Explain the term "Professional Skepticism"? What is not included in Audit Risk? How would you draw the relationship the concept of materiality and audit risk?

MCQ

(1) Audit risk is a function of the risks of material misstatement and -------.

(a) Inherent Risk

(b) Control Risk

(c) Detection Risk

(d) Business Risk

(2) There exists --------- relationship between risk of material misstatement and detection risk.

(a) Direct

(b) Inverse

(c) No

(d) Positive

(3) It is a system of allocation of responsibility, division of work, and methods of recording transactions, whereby the work of an employee is checked continuously by another. Here, "it" refers to

(a) Internal Check

(b) Internal Audit

(c) Internal Control

(d) Operational Control

(4) The assessment of risks is a matter of professional --------, rather than a matter capable of precise measurement.

(a) Skill

(b) Scepticism

(c) Diligence

(d) Judgement

(5) It is a graphic presentation of each part of the company's system of internal control. Here, "it" refers to

(a) Narrative Records

(b) Check List

(c) Internal Control Questionnaire

(d) Flow Chart

(6) Section ------ of the Companies Act 2013 describes that a Chartered Accountant, a Cost Accountant or any other professional as may be decided by the Board can be appointed as an Internal Auditor.

(a) 135

(b) 138

(c) 141

(d) 144

(7) The primary responsibility for establishing and maintaining an internal control rests with

(a) The external auditors

(b) The internal auditors

(c) Management and those charged with governance

(d) The controller or the treasurer

(8) Inherent Risk refers to

(a) Risk of an inappropriate opinion

(b) Risk of failure of internal control in the prevention or detection of material misstatements

(c) Susceptibility of account balances or class of transaction to be materially misstated, assuming there were no internal controls

(d) Risk of non-detection of material misstatements in financial statements

Environmental Audit

(Prepared by: Atanu Pramanick)

Concept

During past few decades, adverse environmental effect of economic development has become a matter of great public concern all over the world. It has been increasingly realized that industrial and development activities are a key contributor to the escalating environmental degradation of the earth, through intensive use of natural resources and generation of environmental pollutants and waste that overwhelm the natural environment's capacity to recover. So, they must take all the steps to protect the environment and to minimize the adverse environmental impact to this planet, in a sustainable manner for the sake of the future generation.

The recognition regulators and public have given to the importance of environmental issues and sustainability challenge. Various laws have been enacted at national and international levels addressing issues like, pollution, conservation of resources, global warming and climate change. Also, ever increasing ethical consumers, ethical investors (mainly institutional investors), concerns by media, NGOs and awareness among stakeholders about environmental risk and its impact on financial results of the concerns have compelled the companies to redefine their products, processes and markets to make them more environmental friendly and less resource consuming. In fact, environmental issues have become so central to organizational management that any organisation ignoring environmental aspect in its functioning would indirectly endanger its own existence.

Since companies have started taking green initiatives to reduce their carbon footprint and to conserve the resources, it has become necessary that some action should be taken to evaluate green performance of the company. Environmental audit, popularly called green audit, is a step in this direction. Simply speaking, environmental audit refers to verification of environmental measures taken by an organization. It is a branch of social audit. Environmental audit aims at verification and validation to ensure that various environmental laws are duly complied with and adequate care has been taken towards environmental protection and preservation. It is a wide term which includes in it mainly three areas – Environmental compliance audit, Environmental performance audit, and Environmental financial audit. While compliance audit seeks to ensure compliance with relevant environmental laws, standards, industry guidelines and company policies; focus of environmental performance audit is on verification of environmental performance of the concern to ensure application of the best business practices to decrease potential environmental liabilities and to mitigate environmental risks. In the environmental financial audit, the auditor verifies accuracy and authenticity of all significant environmental costs, benefits, assets and liabilities reported by the concern. Basically, environmental audit is an independent evaluation of policy and principles, systems procedures, practices and performance, and other elements of a business relating to environment.

These days, environmental audit has become a valuable tool in the management and monitoring of environmental and sustainable development programs. Conducting an environmental audit is no longer optional but a sound precaution and a proactive measure in today's highly regulated environment.

Definition

Some important definitions of environmental audit are as follows:

- According to US Environmental Protection Agency (EPA), 'Environmental audit is a systematic, documented, periodic and objective review by a regulated entity of facility, operations and practices related to meeting environmental requirements."
- The Confederation of British Industry (1990) defines environmental audit as, "the systematic examination of the interaction between any business operations and its surroundings. This includes all emissions to air, land and water; legal constraints; the effects on the neighboring community, landscape, and ecology; and the public's perception of the operating company in the local area. Environmental audit does not stop at compliance with legislation nor is it a green washing public relation exercise rather it is a total strategic approach to the organisation's activities."
- The International Chambers of Commerce (ICC) in its publication Environmental Auditing (1989) defines environmental auditing as "a management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing, with the aim of helping safeguard the environment by:
    a. Facilitating management control of environmental practices; and
    b. Assessing compliance with company policies which would include meeting regulatory requirements."

Hence, environmental audit may be defined as a means of management which allows exhaustive, documented, periodical and objective evaluation of the way in which management and equipments of an entity manage and control their environmental impacts and comply with environmental policies, standards and environmental laws.

Features of Environmental Audit

The following are features of environmental audit:

i. **Management tool -** Environmental audit is generally considered as one of the management tool which is a part of internal control system and is mainly used to assess, evaluate and manage environmental performance of a company. It can be taken as one of the many ways used by management to respond to the environmental issues.

ii. **Aim of environmental audit -** A green audit may be conducted for many purposes, for example, to comply with environmental laws or as a social responsibility measure or to meet some certification requirements. But the main and ultimate aim of any environmental audit is to evaluate and control the adverse impact of economic activities of an organization on the environment.

iii. **Environmental audit should be distinguished from Environmental Impact Assessment (EIA) -** EIA is a tool used to predict, evaluate and analyze environmental impacts mostly before a project commences. It assesses the potential environmental effects of a proposed facility. Whereas environmental audit looks at environmental performance for an existing operation or activity. The essential purpose of an environmental audit is the systematic scrutiny of environmental performance throughout a company’s existing operations.

iv. **Systematic -** Environmental audit is a systematic process that must be carefully planned, structured and organized. As it is a part of a long-term process of evaluation and checking, it needs to be a repeatable process so that over time, it can be easily used by different teams of people in such a way that the results are comparable and can reflect change in both quantitative and qualitative terms.

v. **Documented -** Like any other audit, the base of any environmental auditing is that its findings are supported by documents and verifiable information. The audit process is designed in such a way that it seeks to verify on a sample basis past actions, activities, events and procedures with available evidences to ensure that they were carried out according to system’s requirements and in a correct manner.

vi. **Periodic -** Environmental audit is generally conducted at pre-defined intervals. It is a long-term process because it can sometimes take long time before sustainable environmental change and improvement can be tracked clearly.

vii. **Objective evaluation -** Though environmental auditing is conducted using pre-decided policies, procedures and a proper documented system, there is always an element of subjectivity in an audit, particularly if it is conducted internally. In addition to internal environmental audits, having independent audit teams that have specialized skills and who come back periodically (say annually) to repeat audits tends to increase objectivity in the system. Hence for the sake of objectivity, external environmental audits are preferable. This is also required under many certification guidelines (e.g. ISO 14401).

viii. **Environmental performance -** As mentioned before, the essence of any environmental audit is to find out how well the environmental organization, environmental management and environmental equipments are performing. The ultimate aim is to ensure that organisation's environmental performance meets the goals set in its environmental policy and also to ensure compliance with standards and regulatory requirements.

Objectives of Environmental Audit

At national level, the main objective of environmental audit is to see that the natural resources are properly utilized and proper steps have been undertaken to control or to prevent adverse affects of production, development and other activities on the environment. The aim is to ensure that the natural resources are utilized for industrial development and for national progress and at the same time, to see that proper steps have been undertaken for maintaining health, welfare of the community and also for dispersal of harmful wastes and social risks.

At corporate level, there are some environmental responsibilities facing companies like, meeting regulatory requirements, cleaning up pollution that already exists, properly disposing of the hazardous material, disclosing to the investors the amounts and nature of the preventive measures taken by the management, operating in a way that environmental damage does not occur, and promoting a company-wide environmental attitude. To check fulfillment of these environmental responsibilities by the organization, environmental audits are conducted. Environmental audit aims at evaluating and reporting key environmental performances measures like, pollution control measures, energy conservation or waste management techniques etc. The main objective of an environmental audit at organizational level is to ensure conservation of scarce natural resources and to promote use of clean technologies in industrial production and to minimize generation of pollution and waste.

The following are the major objectives of environmental audit:

i. Determine and document compliance status;
ii. Help to improve environmental performance at operational facilities;
iii. Assist facility management;
iv. Increase the overall level of environmental awareness;
v. Accelerate the overall development of environmental management control system;
vi. Improve the risk management systems;
vii. Protect the corporation from potential liabilities; and
viii. Develop a basis for optimizing environmental resources.

Advantages of Environmental Auditing

If environmental audit is undergone in a constructive way, there are many benefits to be derived from the process. Some of these benefits are as follows:

a. **Improves efficiency of Environmental Management System (EMS) -** Environmental audit encourages an organization to examine its operations in a constructive manner and is the cornerstone of an effective EMS. It helps in assessing performance of the EMS, identifies deficiencies in the system and provides the basis for environmental improvement plans. On the basis of findings of environmental audit, management can recommend corrective actions and identify further training needs.
b. **Compliance with environmental laws and standards -** The most important benefit of environmental audit is that it ensures cost effective compliance with environmental laws and regulations, industry guidelines and standards, and company's own environmental policies.
c. **Risk mitigation -** There is a growing belief that environmental issues represent a source of risk in terms of unforeseen or foreseen reputation damage or similar other risks. In fact, it is the concern regarding environmental risks which has led to the development of the field of environmental audit. Environmental audit can act as effective risk management tool for assessing compliance with environmental legislation, and thereby, assisting the company in avoiding the risk of prosecution and fine arising from potential environmental breaches. This is particularly for those involved in hazardous polluting industries.

d. **Meeting stakeholders' expectations -** These days, stakeholders have heightened expectations for a company's environmental performance. They are concerned about environmental responsibility and want to know about potential hazards and future environmental liabilities of the companies. Conducting environmental audits will help in reassuring various stakeholders that the company is living up to its environmental principles. It helps in enhancing reputation of the company as a good corporate citizen. It assists good relations with control authorities and also increases confidence with the general public.

e. **Reductions in operation inefficiencies-** Environmental audit can highlight areas of inefficiencies in the operations and processes, for examples, where the amount of resources used is out of proportion to the amount of items or services produced and sold. By identifying operational inefficiencies, a company may be able to reduce its cost and or improve its environmental performance. In addition, it also highlights ways of safeguarding the environment.

f. **Encourages continual improvement-** By pinpointing both strengths and weaknesses in the environmental management and other operating systems relating to the environment on a regular basis an environmental audit encourages continual improvement.

g. **Compliance with certification requirements-** Conducting an environmental audit can be important step towards gaining a requisite certifications like ISO 14001 or cradle to grave or product specific certification form organization like, Energy Star, LEED, the Forest Stewardship Council, Chlorine Free Products Association, etc.

h. **Increases employees' awareness of corporate environmental policy and responsibility-** Environmental audit demonstrates to the employees company's commitment to environmental protection. It upgrades the level of information for use in emergency situations. It also provides the company with a greater overall awareness of its workers, potential health hazards, risks and other needs. It boosts staff morale and commitment to quality within the company.

i. **Assists management in decision-making-** Environmental audit provides an environmental database to assist management decisions on plant modifications, designing of new projects, identifying new market and commercial opportunities. It also enables management to set targets and give credit for good environmental performance. Increasingly, companies are recognizing the practice of ecological auditing as a valuable environmental management tool as it can provide information for management review (audit findings and recommendations); raise corporate image with respect to environmental concerns; provide competitive advantage by raising corporate profile with respect to environmental issues, especially through ISO 14001 certification; facilitate evaluating the integration of the corporate EMS into the operation being audited; improve management control and allow checking and corrective action in the light of increasing complexity of environmental legislation.

Hence, there are several benefits of environmental auditing. Environmental audit has shown to the corporations that environmental protection can be regarded as an investment in the future. It helps in complying with regulatory requirements.

Reference:

- ICAI Study Material
- Guide on Environmental Audit, ICAI

Secretarial Audit

(Prepared by: Atanu Pramanick)

Concept

Secretarial Audit is an audit to check compliance of various legislations including the Companies Act and other corporate and economic laws applicable to the company. The Secretarial Auditor expresses an opinion as to whether there exist adequate systems and processes in the company commensurate with the size and operations of the company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines. Secretarial Audit helps to detect the instances of non-compliance and facilitates taking corrective measures. It audits the adherence of good corporate practices by the company.

It is therefore an independent and objective assurance intended to add value and improve operations of the Company. It helps to accomplish the organisation’s objectives by bringing a systematic, disciplined approach to evaluate and improve effectiveness of risk management, control, and governance processes. Secretarial Audit thus provides necessary comfort to the management, regulators and the stakeholders, as to the statutory compliance, good governance and the existence of proper and adequate systems and processes.

Definition

Secretarial Audit is a process to check compliance with the provisions of various laws and rules/ regulations/ procedures, maintenance of books, records etc., by an independent professional to ensure that the company has complied with the legal and procedural requirements and also followed the due processes. It is essentially a mechanism to monitor compliance with the requirements of stated laws and processes.

Objectives

The objectives of Secretarial Audit may be briefed as under.

(i) To check & Report on Compliances

(ii) To Point out Non-Compliances and Inadequate Compliances

(iii) To protect the interest of the customers, employees, society etc.

(iv) To avoid any unwarranted legal actions by law enforcing agencies and other persons as well.

Benefits

Secretarial Audit can be an effective to assure the regulator, generate confidence amongst the shareholders, the creditors and other stakeholders in companies and instill self regulation and professional discipline in companies.

(a) ***Promoters:*** Secretarial Audit assures the promoters of a company that those in-charges of its management are conducting its affairs in accordance with the requirements of laws and the owners' stake is not being exposed to unintended risk.

(b) ***Non-executive/Independent directors:*** Secretarial Audit provides comfort to the Non-executive/Independent Directors that appropriate mechanisms and processes are in place to ensure compliance with laws applicable to the company, thus mitigating any risk from a regulatory or governance perspective.

(c) ***Government authorities/regulator:*** It also facilitates reducing the burden of the regulators in ensuring compliances and they can take timely actions against the offenders.

(d) ***Investors:*** Secretarial Audit helps the investors in taking informed investment decision, as it evaluates the company in terms of compliance and governance norms being followed by the company.

(e) ***Other Stakeholders:*** It is an effective due diligence exercise for the prospective investors or joint venture partners. Further Financial Institutions, Banks, Creditors and Consumers can measure the law abiding nature of company management.

(f) Benefits to the company itself: Companies with their compliance programs lay the foundation for good governance. Companies with an effective compliance protect management from any kind of penalties.

The Secretarial Audit provides an in-built mechanism for enhancing corporate compliance generally and helps restore the confidence of investors in the capital market through greater transparency in corporate functioning.

Applicability

As per section 204(1) of Companies Act, 2013 read with rule 9 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, the following companies are required to obtain Secretarial Audit Report:

- Every listed company; or
- Every public company having a paid-up share capital of fifty crore rupees or more; or
- Every public company having a turnover of two hundred fifty crore rupees or more.

Secretarial Audit would be applicable to a private company which is a subsidiary of a public company, and which falls under the prescribed class of companies.

"Turnover" means the aggregate value of the realisation of amount made from the sale, supply or distribution of goods or on account of services rendered, or both, by the company during a financial year.

Scope of Secretarial Audit

The scope of Secretarial Audit comprises verification of the compliances under the following enactments, rules, regulations and guidelines:

(i) The Companies Act, 2013 and the rules made thereunder;

(ii) The Securities Contracts (Regulation) Act, 1956 and the rules made thereunder;

(iii) The Depositories Act, 1996 and the Regulations and Bye-laws framed thereunder;

(iv) Foreign Exchange Management Act, 1999 and the rules and regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Borrowings;

(v) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992:-

(a) The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011;

(b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 1992;

(c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2009;

(d) The Securities and Exchange Board of India (Employee Stock Option Scheme and Employee Stock Purchase Scheme) Guidelines, 1999;

(e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008;

(f) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agents) Regulations, 1993 regarding the Companies Act and dealing with client;

(g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009;

(h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 1998;

(vi) Other laws as may be applicable specifically to the company.

Thus the scope of **Secretarial audit** is not limited to the corporate laws applicable to company but it extent to all laws applicable to company.

Appointment of Secretarial Auditor

Only a member of the Institute of Company Secretaries of India holding certificate of practice (Company Secretary in Practice) can conduct Secretarial Audit and furnish the Secretarial Audit Report to the company. [Section 204(1) of Companies Act, 2013]

As per Rule 8 of the Companies (Meetings of Board and its powers) Rules, 2014, Secretarial Auditor is required to be appointed by means of resolution passed at a duly convened Board meeting. The Board Resolution for the Appointment of the Secretarial Auditor is required to be filed with Registrar of the Companies in **e-form MGT-14** within a period of 30 days from the date of appointment.

Secretarial Audit Report

Secretarial Audit Report is required to be provided in the format prescribed in Form MR-3.

Pursuant to the provisions of section 204 of the Companies Act 2013, every listed company and company belonging to class of companies as prescribed is required to annex with its Board's Report, a Secretarial Audit Report given by a Company Secretary in Practice. Companies which are not covered under section 204 may obtain Secretarial Audit Report voluntarily as it provides an independent assurance of the compliances in the company.

Rights and Duties of Secretarial Auditor

Section 143 of the Companies Act, 2013 deals with powers and duties of Auditors. Sub-section (14) of the section provides that the provisions of this section shall *mutatis mutandis* apply to the Company Secretary in Practice conducting Secretarial Audit under section 204.

References:

- ICSI Study Material
- FAQs on Secretarial Audit, ICSI

Secretarial Standards

(Prepared by: Atanu Pramanick)

Meaning

Secretarial Standards are the policy documents relating to various aspects of secretarial practices in the corporate sector. These Standards lay down a set of principles which companies are expected to adopt and adhere to, in discharging their responsibilities.

The ultimate goal of the Secretarial Standards is to promote good corporate practices leading to better corporate governance. The Standards are for good secretarial practices and desirable corporate governance with a view to ensuring shareholders democracy and utmost transparency, integrity and fair play, going beyond the minimum requirements of law.

The adoption of the Secretarial Standards by the corporate sector will, over the years have a substantial impact on the improvement of quality of secretarial practices being followed by companies, making them comparable with the best practices in the world.

Many companies today are voluntarily adopting the Secretarial Standards in their functioning. The annual reports of several companies released during the last few years include a disclosure with regard to the compliance of the Secretarial Standards.

By following the Secretarial Standards in true letter and spirit, companies will be able to ensure adoption of uniform, consistent and best secretarial practices in the corporate sector. Such uniformity of best practices, consistently applied, will result in furthering the shareholders democracy by laying down principles for better corporate disclosures thus adding value to the general endevour to strive for good governance.

Establishment of Secretarial Standards Board and its Objectives

The Institute of Company Secretaries of India, (ICSI), recognising the need for integration, harmonization and standardisation of diverse secretarial practices, has constituted the Secretarial Standards Board (SSB) with the objective of formulating Secretarial Standards. The establishment of Secretarial Standards Board by ICSI in the year 2000 is a visionary step.

The Secretarial Standards Board (SSB) formulates Secretarial Standards taking into consideration the applicable laws, business environment and the best secretarial practices prevalent. Secretarial Standards are developed in a transparent manner; after extensive deliberations, analysis, research; and after taking views of corporates, regulators and the public at large.

The SSB comprises of eminent members of the profession holding responsible positions in well-known companies and as senior members in practice, as well as representatives of regulatory authorities such as the Ministry of Corporate Affairs, the Securities and Exchange Board of India and the sister professional bodies viz. the Institute of Chartered Accountants of India and the Institute of Cost Accountants of India.

Scope and Functions of the Secretarial Standards Board

The scope of SSB is to identify the areas in which Secretarial Standards need to be issued by the Council of ICSI and to formulate such Standards, taking into consideration the applicable laws, business environment and best secretarial practices. SSB will also clarify issues arising out of such Standards and issue guidance notes for the benefit of members of ICSI, corporate and other users.

The main functions of SSB are:

(i) Formulating Secretarial Standards;

(ii) Clarifying issues arising out of the Secretarial Standards;

(iii) Issuing Guidance Notes; and

(iv) Reviewing and updating the Secretarial Standards / Guidance Notes at periodic intervals.

Scope of Secretarial Standards

The Secretarial Standards do not seek to substitute or supplant any existing laws or the rules and regulations framed thereunder but, in fact, seek to supplement such laws, rules and regulations. Secretarial Standards that are issued will be in conformity with the provisions of the applicable laws. However, if, due to subsequent changes in the law, a particular Standard or any part thereof becomes inconsistent with such law, the provisions of the said law shall prevail.

Procedure for issuing Secretarial Standards

The following procedure shall be adopted for formulating and issuing Secretarial Standards:

1. SSB, in consultation with the Council, shall determine the areas in which Secretarial Standards need to be formulated and the priority in regard to the selection thereof.

2. In the preparation of Secretarial Standards, SSB may constitute Working Groups to formulate preliminary drafts of the proposed Standards.

3. The preliminary draft of the Secretarial Standard prepared by the Working Group shall be circulated amongst the members of SSB for discussion and shall be modified appropriately, if so required.

4. The preliminary draft will then be circulated to the members of the Central Council as well as to Chairmen of Regional Councils/Chapters of ICSI, various professional bodies, Chambers of Commerce, regulatory authorities such as the Ministry of Corporate Affairs, the Department of Economic Affairs, the Securities and Exchange Board of India, Reserve Bank of India, Department of Public Enterprises and to such other bodies/organisations as may be decided by SSB, for ascertaining their views, specifying a time-frame within which such views, comments and suggestions are to be received.

A meeting of SSB with the representatives of such bodies/organisations may then be held, if considered necessary, to examine and deliberate on their suggestions.

5. On the basis of the preliminary draft and the discussion with the bodies/organisations referred to in 4 above, an Exposure Draft will be prepared and published in the “Chartered Secretary”, the

journal of ICSI, and also put on the Website of ICSI to elicit comments from members and the public at large.

6. The draft of the proposed Secretarial Standard will generally include the following basic points:

(a) Concepts and fundamental principles relating to the subject of the Standard;

(b) Definitions and explanations of terms used in the Standard;

(c) Objectives of issuing the Standard;

(d) Disclosure requirements; and

(e) Date from which the Standard will be effective.

7. After taking into consideration the comments received, the draft of the proposed Secretarial Standard will be finalised by SSB and submitted to the Council of ICSI.

8. The Council will consider the final draft of the proposed Secretarial Standard and finalise the same in consultation with SSB. The Secretarial Standard on the relevant subject will then be issued under the authority of the Council.

Secretarial Standards Issued so far by the ICSI

The Institute has so far issued the following Secretarial Standards:

— Secretarial Standard on Meetings of the Board of Directors (SS-1)

— Secretarial Standard on General Meetings (SS-2)

— Secretarial Standard on Dividend (SS-3)

— Secretarial Standard on Registers and Records (SS-4)

— Secretarial Standard on Minutes (SS-5)

— Secretarial Standard on Transmission of Shares and Debentures (SS-6)

— Secretarial Standard on Passing of Resolutions by Circulation (SS-7)

— Secretarial Standard on Affixing of Common Seal (SS-8)

— Secretarial Standard on Forfeiture of Shares (SS-9)

— Secretarial Standard on Board's Report (SS-10)

Secretarial Standards under the Companies Act, 2013

The provisions of Section 118 (10) of the Companies Act, 2013 mandate the observance of Secretarial Standards on General and Board Meetings specified by The Institute of Company Secretaries of India and approved by Central Government.

Thus, Secretarial Standard on the Meetings of Board of Directors (SS-1) and Secretarial Standard on General Meeting (SS-2) have absolute binding force.

SS-1 is applicable to all companies incorporated under the Act except One Person Company (OPC) in which there is only one Director on its Board.

SS-2 is applicable to all types of General Meetings of all companies incorporated under the Act except One Person Company (OPC) and class or classes of companies which are exempted by the Central Government through notification.

Other than 118 (10) followings are the other provisions of the Act required compliance with the Secretarial Standards issued by ICSI

❖ Section 121 of the Companies Act, 2013 requires confirmation with respect to compliance of Secretarial Standards in the Report on the AGM.

❖ Section 205 (1) of the Companies Act, 2013 lays down the functions of the Company Secretary which inter-alia include ensuring that the company complies with the applicable Secretarial Standards.

❖ Form No. MR-3 (format of the Secretarial Audit Report), pursuant to Section 204 (1) of the Companies Act, 2013 and Rule 9 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, requires the Secretarial Auditor to examine compliance by the company with the applicable clauses of the Secretarial Standards and report on compliance or non-compliance thereof.

References:

- ICSI Study Material
- FAQs on Secretarial Standards, ICSI

Professional Ethics and Professional Misconduct

(Prepared by: Atanu Pramanick)

Concept

The term *"Ethics"* means moral principles which govern a person's behaviour or the conducting of an activity. It deals with moral principles, whereas *"Professional Ethics"* consist of personal, organizational and corporate standards of behaviour expected for professionals. The sole purpose of Code of Ethics is to ensure and uphold the credibility.

Chartered Accountants as professionals are engaged in building trust to vast variety of users, whether shareholders, government, banks, investors, employees or others, which imposes a public interest responsibility on their profession. Like other professionals, Chartered Accountants also have some set of code of ethics. This Code of Ethics establishes ethical requirements for Professional Accountants. On the contrary Code of Ethics seeks to protect the interests of the profession as a whole.

A Chartered Accountant, either in practice or in service, has to abide by these ethical behaviours. They are expected to follow the fundamental principles of professional ethics while performing their jobs. Service users of professionals should be able to feel secure that there exists a framework of professional ethics which governs the provision of those services. Any deviation from the ethical responsibilities brings the disciplinary mechanism into action against the Chartered Accountants.

The International Federation of Accountants (IFAC), in its guidelines on Professional Ethics for the Accountancy Profession, has stated: "Persons who pursue a vocation in which they offer their knowledge and skills in the service of the affairs of other have responsibilities and obligations to those who rely on their work. An essential pre-requisite for any group of such persons is the acceptance and observance of professional, ethical standards regulating their relationship with clients, employers, employees, fellow members of the group and the public generally."

Objectives

These objectives require four basic needs to be met:

Credibility: In the whole of society there is a need for credibility in information and information system.

Professionalism: There is a need for individuals who can be clearly identified by clients, employers and other interested parties as professional persons in the accountancy field.

Quality of Services: There is a need for assurance that all services obtained from a professional accountant are carried out to the highest standards of performance.

Confidence: Users of the services of professional accountants should be able to feel confident that there exists a framework of professional ethics which governs the provision of those services.

Fundamental Principles of Professional Ethics

In order to achieve the objectives of the Accountancy profession, professional accountants have to observe a number of prerequisites or fundamental principles. The fundamental principles are:

Integrity: A professional accountant should be straightforward and honest in performing professional services.

Objectivity: A professional Accountant should be fair and should not allow prejudice or bias, conflict of interest or influence of others to override objectivity.

Professional competence: A professional accountant should perform professional services with due care, competence and diligence and has a continuing duty to maintain professional knowledge, skill and sound judgment at a level required to ensure that a client or employer receives the advantage of competent professional service based on up-to-date developments in practice legislation and techniques.

Due Professional Care: It does not require ultimate expert but does extend to every aspect of the audit including the evaluation of audit risk, formulation of audit objective, establishment of audit scope, selection of audit tests and evaluation of test result. It requires an individual to exercise the skill of a level commonly possessed by practitioners of that specialty.

Confidentiality: A professional accountant should respect the confidentiality of information acquired during the course of performing professional services and should not use or disclose any such information without proper and specific authority or unless there is a legal or professional right or duty or disclose.

Professional Behavior: A professional accountant should act in a manner consistent with the good reputation of the profession and refrain from any conduct which might bring discredit to the profession. The obligation to refrain from conduct which might bring discredit to the profession requires IFAC member bodies to consider, when developing ethical requirements, the responsibilities of a professional accountant to client, third parties and other members of the accountancy professions, staff, employers and the general public.

Technical Standards: A professional accountant should carry out professional services in accordance with the relevant technical and profession standards. Professional accountants have a duty to carry out with care and skill, the instruction of the client or employer in-so-far as they are compatible with the requirements of integrity, objectivity and in the case of professional accountants in public practice independence.

Professional Misconduct

A Chartered Accountant whether in Practice or Service is liable to disciplinary action under the Chartered Accountants Act, if he is found guilty of any Professional or Other Misconduct

Chartered Accountants in Practice: A practicing Chartered Accountant is a person who is a member of the Institute and is holding Certificate of Practice; and includes such members of the Institute who are deemed to be in Practice in accordance with the provisions of the Chartered Accountants Act, 1949 (Act).

Chartered Accountants in Service: In accordance with the definitions provided under the Code of Ethics, a Professional Accountant in Service or Chartered Accountant in Service means a professional accountant employed or engaged in an executive or non-executive capacity in such areas as commerce, industry, service, the public sector, education, the not for profit sector, regulatory bodies or professional bodies, or a professional accountant contracted by such entities.

Types of Misconduct- Professional or Other

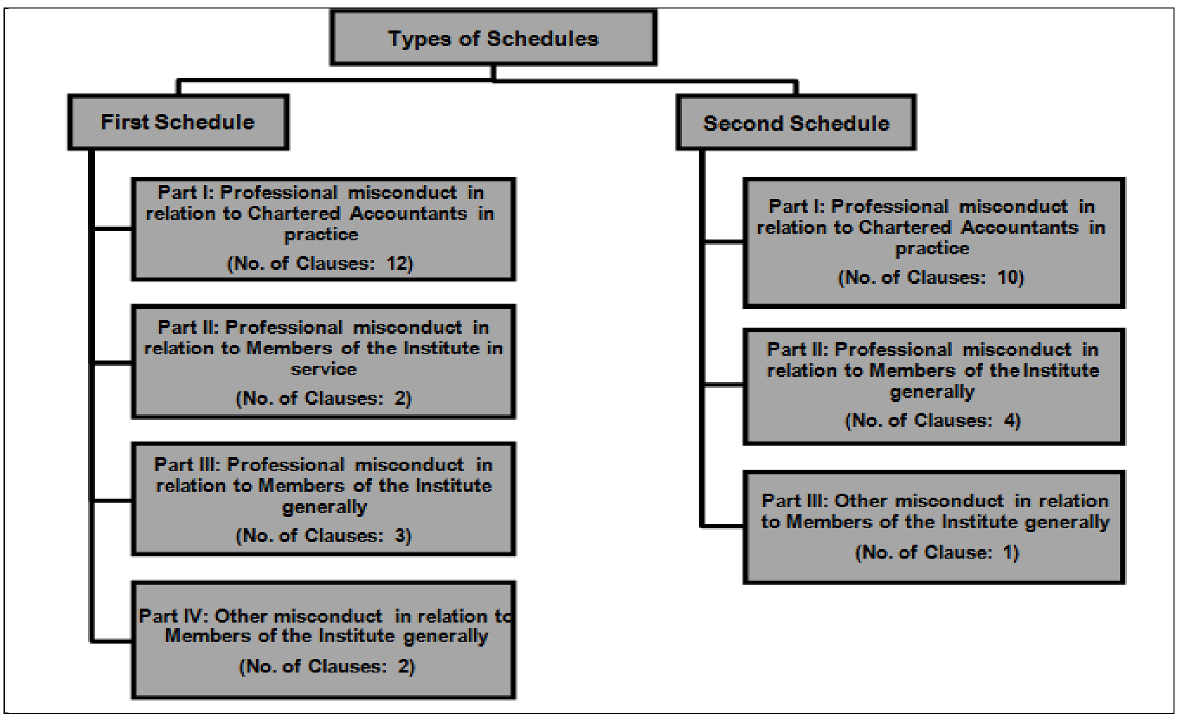
According to Section 22 of the Act, the expression 'professional or other misconduct' shall be deemed to include any act or omission specified in any of the Schedules, but nothing in this section shall be construed to limit or abridge in any way the power conferred or duty cast on the Director (Discipline) under sub-section (1) of section 21 to inquire into the conduct of any member of the Institute under any other circumstances.

Professional Misconduct: Professional misconduct has been defined in part I, II and III of the First Schedule; and part I and II of the Second Schedule. A member who is engaged in the profession of accountancy whether in practice or in service should conduct/restrict his action in accordance with the provisions contained in the respective parts of the schedules. If the member is found guilty of any of the acts or omissions stated in any of the respective parts of the Schedule, he/she shall be deemed to be guilty of professional misconduct.

Other Misconduct: Other misconduct has been defined in part IV of the First Schedule and part III of the Second Schedule. These provisions empower the Council to inquire into any misconduct of a member even it does not arise out of his professional work. This is considered necessary because a chartered accountant is expected to maintain the highest standards of integrity even in his personal affairs and any deviation from these standards, even in his non-professional work, would expose him to disciplinary action. For example, a member who is found to have forged the will of a relative would be liable to disciplinary action even though the forgery may not have been done in the course of his professional duty.

Other misconduct would also relate to conviction by a competent court for an offence involving moral turpitude punishable with transportation or imprisonment to an offence not of a technical nature committed by the member in his professional capacity.

Every profession has its own Code of Ethics. The Chartered Accountants Act, 1949 has been enacted by the Parliament for the regulation of the profession of Chartered Accountants and for the purpose of carrying out the object of the Act, the Chartered Accountants Regulations, 1988 have been enacted. The Act has two schedules i.e. First Schedule & Second Schedule. Acts or omissions which comprise professional misconduct within the meaning of Section 22 of the Act are defined in two Schedules.



Source: ICAI Study Material

The First Schedule is divided into four parts, Part I of the First Schedule deals with the misconduct of a member in practice which would have the effect generally of compromising his position as an independent person. Part II deals with misconduct of members in services. Part III deals with the misconduct of members generally and Part IV deals with other misconduct in relation to members of the institute generally.

The Second Schedule is divided into three parts. Part I deals with misconduct in relation to a member in practice, Part II deals with misconduct of members generally and Part III deals with other misconduct in relation to members of the Institute generally.

These two schedules along with the decisions of the Courts on professional misconducts, decisions, directions, guidelines, statements, clarifications and also interpretations of the Council on the various clauses of these two schedules constitute the Code of Ethics for the accountancy profession.

- ***THE FIRST SCHEDULE***

<u>PART I: Professional misconduct in relation to chartered accountants in practice</u>

A chartered accountant in practice shall be deemed to be guilty of professional misconduct, if he-

(1) allows any person to practice in his name as a chartered accountant unless such person is also a chartered accountant in practice and is in partnership with or employed by him;

(2) pays or allows or agrees to pay or allow, directly or indirectly, any share, commission or brokerage in the fees or profits of his professional business, to any person other than a member of the Institute or a partner or a retired partner or the legal representative of a deceased partner, or a member of any other professional body or with such other persons having such qualifications as may be prescribed, for the purpose of rendering such professional services from time to time in or outside India.

(3) accepts or agrees to accept any part of the profits of the professional work of a person who is not a member of the Institute:

Provided that nothing herein contained shall be construed as prohibiting a member from entering into profit sharing or other similar arrangements, including receiving any share commission or brokerage in the fees, with a member of such professional body or other person having qualifications, as is referred to in item (2) of this Part;

(4) enters into partnership, in or outside India, with any person other than a chartered accountant in practice or such other person who is a member of any other professional body having such qualifications as may be prescribed, including a resident who but for his residence abroad would be entitled to be registered as a member under clause (*v*) of sub-section (*1*) of Section 4 or whose qualifications are recognised by the Central Government or the Council for the purpose of permitting such partnerships;

(5) secures, either through the services of a person who is not an employee of such chartered accountant or who is not his partner or by means which are not open to a chartered accountant, any professional business:

Provided that nothing herein contained shall be construed as prohibiting any arrangement permitted in terms of items (2), (3) and (4) of this Part;

(6) solicits clients or professional work either directly or indirectly by circular, advertisement, personal communication or interview or by any other means:

Provided that nothing herein contained shall be construed as preventing or prohibiting−

(*i*) any chartered accountant from applying or requesting for or inviting or securing professional work from another chartered accountant in practice; or

(*ii*) a member from responding to tenders or enquiries issued by various users of professional services or organizations from time to time and securing professional work as a consequence;

(7) advertises his professional attainments or services, or uses any designation or expressions other than chartered accountant on professional documents, visiting cards, letter heads or sign boards, unless it be a degree of a University established by law in India or recognised by the Central Government or a title indicating membership of the Institute of Chartered Accountants of India or of any other institution that has been recognised by the Central Government or may be recognised by the Council:

Provided that a member in practice may advertise through a write up setting out the services provided by him or his firm and particulars of his firm subject to such guidelines as may be issued by the Council;

(8) accepts a position as auditor previously held by another chartered accountant or a certified auditor who has been issued certificate under the Restricted Certificate Rules, 1932 without first communicating with him in writing;

(9) accepts an appointment as auditor of a company without first ascertaining from it whether the requirements of Section 140 of the Companies Act, 2013 in respect of such appointment have been duly complied with;

(10) charges or offers to charge, accepts or offers to accept in respect of any professional employment, fees which are based on a percentage of profits or which are contingent upon the findings, or results of such employment, except as permitted under any regulation made under this Act;

(11) engages in any business or occupation other than the profession of chartered accountant unless permitted by the Council so to engage:

Provided that nothing contained herein shall disentitle a chartered accountant from being a director of a company (not being a managing director or a whole time director) unless he or any of his partners is interested in such company as an auditor;

(12) allows a person not being a member of the Institute in practice, or a member not being his partner to sign on his behalf or on behalf of his firm, any balance-sheet, profit and loss account, report or financial statements.

PART II: Professional misconduct in relation to members of the Institute in service

A member of the Institute (other than a member in practice) shall be deemed to be guilty of professional misconduct, if he being an employee of any company, firm or person−

(1) pays or allows or agrees to pay directly or indirectly to any person any share in the emoluments of the employment undertaken by him;

(2) accepts or agrees to accept any part of fees, profits or gains from a lawyer, a chartered accountant or broker engaged by such company, firm or person or agent or customer of such company, firm or person by way of commission or gratification.

PART III: Professional misconduct in relation to members of the Institute generally

A member of the Institute, whether in practice or not, shall be deemed to be guilty of professional misconduct, if he−

(1) not being a fellow of the Institute, acts as a fellow of the Institute;

(2) does not supply the information called for, or does not comply with the requirements asked for, by the Institute, Council or any of its Committees, Director (Discipline), Board of Discipline, Disciplinary Committee, Quality Review Board or the Appellate Authority;

(3) while inviting professional work from another chartered accountant or while responding to tenders or enquiries or while advertising through a write up, or anything as provided for in items (6) and (7) of Part I of this Schedule, gives information knowing it to be false.

PART IV: Other misconduct in relation to members of the Institute generally

A member of the Institute, whether in practice or not, shall be deemed to be guilty of other misconduct, if he -

(1) is held guilty by any civil or criminal court for an offence which is punishable with imprisonment for a term not exceeding six months;

(2) in the opinion of the Council, brings disrepute to the profession or the Institute as a result of his action whether or not related to his professional work.

❖ THE SECOND SCHEDULE

PART I: Professional misconduct in relation to chartered accountants in practice

A chartered accountant in practice shall be deemed to be guilty of professional misconduct, if he−

(1) discloses information acquired in the course of his professional engagement to any person other than his client so engaging him, without the consent of his client or otherwise than as required by any law for the time being in force;

(2) certifies or submits in his name, or in the name of his firm, a report of an examination of financial statements unless the examination of such statements and the related records has been made by him or by a partner or an employee in his firm or by another chartered accountant in practice;

(3) permits his name or the name of his firm to be used in connection with an estimate of earnings contingent upon future transactions in a manner which may lead to the belief that he vouches for the accuracy of the forecast;

(4) expresses his opinion on financial statements of any business or enterprise in which he, his firm, or a partner in his firm has a substantial interest;

(5) fails to disclose a material fact known to him which is not disclosed in a financial statement, but disclosure of which is necessary in making such financial statement where he is concerned with that financial statement in a professional capacity;

(6) fails to report a material misstatement known to him to appear in a financial statement with which he is concerned in a professional capacity;

(7) does not exercise due diligence, or is grossly negligent in the conduct of his professional duties;

(8) fails to obtain sufficient information which is necessary for expression of an opinion or its exceptions are sufficiently material to negate the expression of an opinion;

(9) fails to invite attention to any material departure from the generally accepted procedure of audit applicable to the circumstances;

(10) fails to keep moneys of his client other than fees or remuneration or money meant to be expended in a separate banking account or to use such moneys for purposes for which they are intended within a reasonable time.

PART II: Professional misconduct in relation to members of the Institute generally

A member of the Institute, whether in practice or not, shall be deemed to be guilty of professional misconduct, if he−

(1) contravenes any of the provisions of this Act or the regulations made thereunder or any guidelines issued by the Council;

(2) being an employee of any company, firm or person, discloses confidential information acquired in the course of his employment except as and when required by any law for the time being in force or except as permitted by the employer;

(3) includes in any information, statement, return or form to be submitted to the Institute, Council or any of its Committees, Director (Discipline), Board of Discipline, Disciplinary Committee, Quality Review Board or the Appellate Authority any particulars knowing them to be false;

(4) defalcates or embezzles moneys received in his professional capacity.

PART III: Other misconduct in relation to members of the Institute generally

A member of the Institute, whether in practice or not, shall be deemed to be guilty of other misconduct, if he is held guilty by any civil or criminal court for an offence which is punishable with imprisonment for a term exceeding six months.

Enquiry into charges of misconduct of the Chartered Accountants

The followings are the mechanism to enquire into charges of misconduct of the Chartered Accountants

- **Disciplinary Directorate (Section 21):**

(1) The Council shall, by notification, establish a Disciplinary Directorate for making investigations in respect of any information or complaint received by it.

(2) On receipt of any information or complaint along with the prescribed fee, the Director (Discipline) shall arrive at a prima facie opinion on the occurrence of the alleged misconduct.

(3) Where the Director (Discipline) is of the opinion that a member is guilty of any professional or other misconduct mentioned in the First Schedule, he shall place the matter before the Board of Discipline and where the Director (Discipline) is of the opinion that a member is guilty of any professional or other misconduct mentioned in the Second Schedule or in both the Schedules, he shall place the matter before the Disciplinary Committee.

(4) In order to make investigations under the provisions of this Act, the Disciplinary Directorate shall follow such procedure as may be specified.

(5) Where a complainant withdraws the complaint, the Director (Discipline) shall place such withdrawal before the Board of Discipline or, as the case may be, the Disciplinary Committee, and the said Board or Committee may, if it is of the view that the circumstances so warrant, permit the withdrawal at any stage.

❖ **Board of Discipline (Section 21A):**

(1) The Council shall constitute a Board of Discipline

(2) The Board of Discipline shall follow summary disposal procedure in dealing with all cases before it.

(3) Where the Board of Discipline is of the opinion that a member is guilty of a professional or other misconduct mentioned in the First Schedule, it shall afford to the member an opportunity of being heard before making any order against him and may thereafter take any one or more of the following actions, namely:

(a) reprimand the member;
(b) remove the name of the member from the Register up to a period of three months;
(c) impose such fine as it may think fit, which may extend to rupees one lakh.

(4) The Director (Discipline) shall submit before the Board of Discipline all information and complaints where he is of the opinion that there is no prima facie case and the Board of Discipline may, if it agrees with the opinion of the Director (Discipline), close the matter or in case of disagreement, may advise the Director (Discipline) to further investigate the matter.

❖ **Disciplinary Committee (Section 21B):**

(1) The Council shall constitute a Disciplinary Committee

(2) The Disciplinary Committee, while considering the cases placed before it shall follow such procedure as may be specified.

(3) Where the Disciplinary Committee is of the opinion that a member is guilty of a professional or other misconduct mentioned in the Second Schedule or both the First Schedule and the Second Schedule, it shall afford to the member an opportunity of being heard before making any order against him and may thereafter take any one or more of the following actions, namely:

(a) reprimand the member;

(b) remove the name of the member from the Register permanently or for such period, as it thinks fit;

(c) impose such fine as it may think fit, which may extend to rupees five lakh.

❖ **Authority, Disciplinary Committee, Board of Discipline and Director (Discipline) to have powers of civil court (Section 21C):**

For the purposes of an inquiry under the provisions of this Act, the Authority, the Disciplinary Committee, Board of Discipline and the Director (Discipline) shall have the same powers as are vested in a civil court under the Code of Civil Procedure, 1908, in respect of the following matters, namely:

(a) summoning and enforcing the attendance of any person and examining him on oath;

(b) the discovery and production of any document; and

(c) receiving evidence on affidavit.

❖ **Appeal to Authority (Section 22G):**

(1) Any member of the Institute aggrieved by any order of the Board of Discipline or the Disciplinary Committee imposing on him any of the penalties referred to in sub-section (3) of section 21A and sub-section (3) of section 21B, may within ninety days of the date on which the order is communicated to him, prefer an appeal to the Appellate Authority (The Central Government shall, by notification, constitute an Appellate Authority [Section 22A]).

Provided that the Director (Discipline) may also appeal against the decision of the Board of Discipline or the Disciplinary Committee to the Authority, if so authorised by the Council, within ninety days.

Provided further that the Authority may entertain any such appeal after the expiry of the said period of ninety days, if it is satisfied that there was sufficient cause for not filing the appeal in time.

(2) The Authority may, after calling for the records of any case, revise any order made by the Board of Discipline or the Disciplinary Committee under sub-section (3) of section 21A and sub-section (3) of section 21B and may -

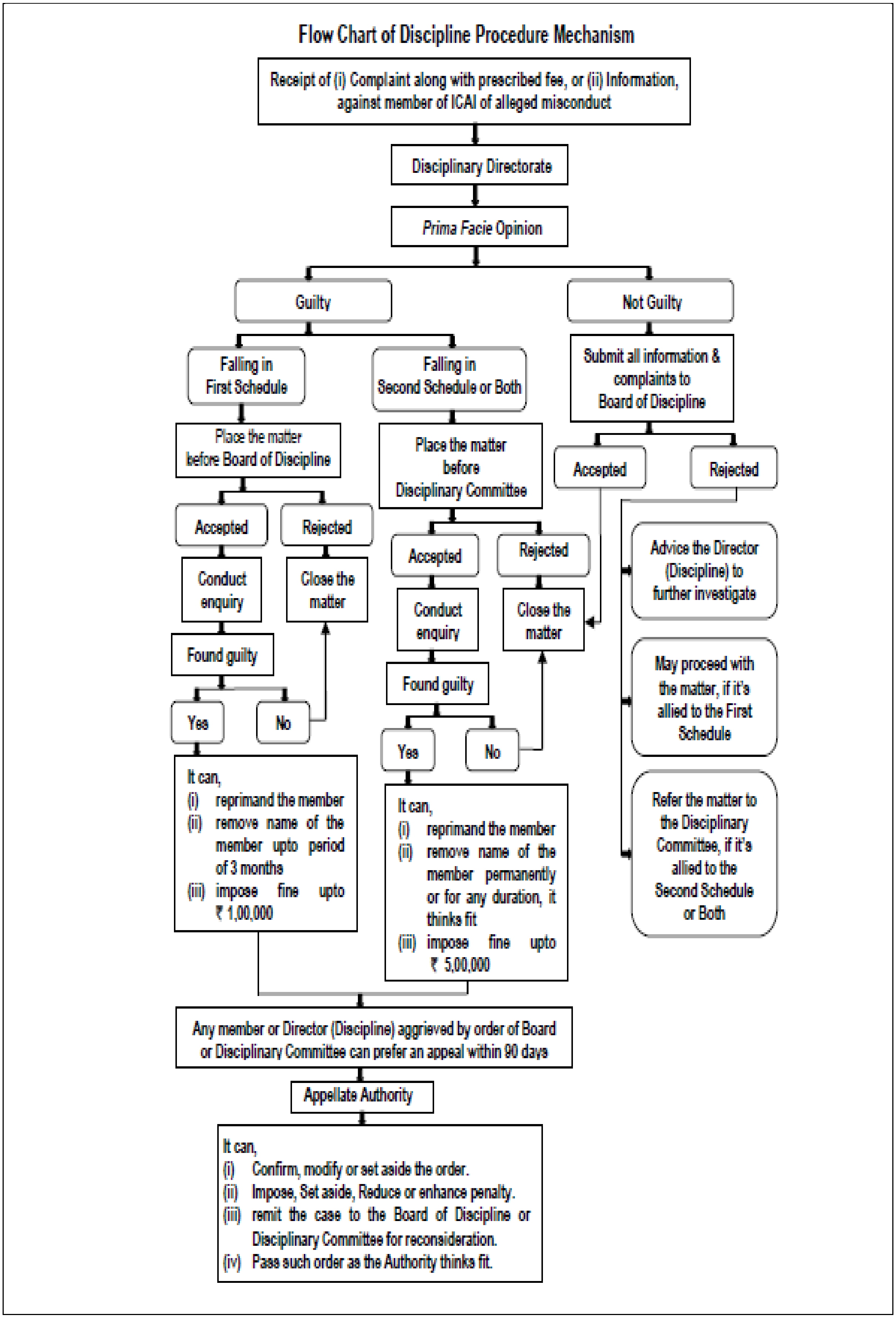
(a) confirm, modify or set aside the order;

(b) impose any penalty or set aside, reduce, or enhance the penalty imposed by the order;

(c) remit the case to the Board of Discipline or Disciplinary Committee for such further enquiry as the Authority considers proper in the circumstances of the case; or

(d) pass such other order as the Authority thinks fit:

Provided that the Authority shall give an opportunity of being heard to the parties concerned before passing any order.



Source: ICAI Study Material

Case Study

Comment on the following with reference to the Chartered Accountants Act, 1949 and Schedules thereto:

Case 1 - Mr. P, a Chartered Accountant in practice entered into a partnership with Mr. L, an advocate for sharing of fees for work sent by one to the other. However, due to some disputes, the partnership was dissolved after 1 month without any fees having been received.

Answer: Partnership with an Advocate: As per Clause (4) of Part I of the First Schedule to the Chartered Accountants Act, 1949, a chartered accountant will be guilty of professional misconduct if he enters into partnership with any person other than a chartered accountant in practice or a person resident without India who but for his residence abroad would be entitled to be registered as a member under Clause (v) of Sub-section (1) of Section 4 or whose qualification are recognized by the Central Government or the Council for the purpose of permitting such partnership.

However, Regulation 53B of the Chartered Accountants Regulations, 1988 permits a Chartered Accountant in practice to enter into partnership with other prescribed Professionals which includes an Advocate, a member of Bar Council of India.

In the instant case, Mr. P, a Chartered Accountant, has entered into partnership with Mr. L, an advocate.

Thus, he would not be guilty of professional misconduct as per Clause (4) of Part I of First Schedule read with Regulation 53B

Case 2 - A partner of a firm of chartered accountants during a T.V. interview handed over a bio-data of his firm to the chairperson. Such bio-data detailed the standing of the international firm with which the firm was associated. It also detailed the achievements of the concerned partner and his recognition as an expert in the field of taxation in the country. The chairperson read out the said bio-data during the interview. Discuss whether this action by the Chartered Accountant would amount to misconduct or not.

Answer: Clause (6) of Part I of the First Schedule to the Chartered Accountants Act, 1949 prohibits solicitation of client or professional work either directly or indirectly by circular, advertisement, personal communication or interview or by any other means since it shall constitute professional misconduct. The bio-data was handed over to the chairperson during the T.V. interview by the Chartered Accountant which included details about the firm and the achievements of the partner as an expert in the field of taxation. The chairperson simply read out the same in detail about association with the international firm as also the achievements of the partner and his recognition as an expert in the field of taxation. Such an act would definitely lead to the promotion of the firms' name and publicity thereof as well as of the partner and as such the handing over of bio-data cannot be approved. The partner would be held guilty of professional miscount under Clause (6) of Part I of the First Schedule to the Chartered Accountants Act, 1949.

Case 3 - A Chartered Accountant in practice had confirmed in the application made by his articled clerk to the Council for permission to study that the normal working hours of his office were 11 a.m. to 6 p.m. and the hours during which the articled clerk was required to attend college classes were 7 a.m. to 9.30 a.m. On inquiry from Principal of College, it was ascertained that the articled clerk used to attend classes from 10 a.m. to 1.55 p.m. The Chartered Accountant pleaded ignorance about the articled clerk attending the college classes during office hours. Will the Chartered Accountant be held guilty of professional misconduct?

Answer: As per Clause (1) of Part II of Second Schedule to the Chartered Accountants Act, 1949, a member shall be held guilty of professional misconduct if he contravenes any provision of the Act or the regulations made thereunder. The chartered accountant, as per Regulations also, is expected to impart proper practical training. In the instant case, the articled clerk must have not been attending office on a regular basis and the explanation of the Chartered Accountant cannot be accepted particularly in view of the fact that the chartered accountant did not obtain certificate from the Principal to confirm the timings. It is also quite likely that the articled clerk would be availing leave quite often and coming late to the office. Under the circumstances, the Chartered Accountant is guilty of professional misconduct in regard to the discharge of his professional duties.

Case 4 - XYZ Co. Ltd. has applied to a bank for loan facilities. The bank on studying the financial statements of the company notices that you are the auditor and requests you to call at the bank for a discussion. In the course of discussions, the bank asks for your opinion regarding the company and also asks for detailed information regarding a few items in the financial statements. The information is available in your working paper file. What should be your response and why?

Answer: Clause (1) of Part I of the Second Schedule to the Chartered Accountants Act, 1949 states that a chartered accountant in practice shall be deemed to be guilty of professional misconduct if he discloses information acquired in the course of his professional engagement to any person other than his client, without the consent of the client or otherwise than as required by law for the time being in force. SA 200 on "Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Standards on Auditing" also reiterates that, "the auditor should respect the confidentiality of information acquired in the course of his work and should not disclose any such information to a third party without specific authority or unless there is a legal or professional duty to disclose". In the instant case, the bank has asked the auditor for detailed information regarding few items in the financial statements available in his working papers. As regard to the position stated earlier, the auditor cannot disclose the information in his possession without specific permission of the client. As far as working papers are concerned, working papers are the property of the auditor. The auditor may at his discretion, make portions of or extracts from his working papers available to his client". Thus, there is no requirement compelling the auditor to divulge information obtained in the course of audit and included in the working papers to any outside agency except as and when required by any law.

Case 5 - Mr. J, a Chartered Accountant has identified that ABC Ltd. has taken a loan of Rs. 15 lakhs from Provident Fund Account, during the course of audit. The said loan was not reflected in the books of accounts and statements were prepared ignoring the same.

Answer: Failure to Disclose Material Facts: As per Clause (5) of Part I of Second Schedule to the Chartered Accountants Act, 1949, a chartered Accountant in practice will be held liable for misconduct if he fails to disclose a material fact known to him, which is not disclosed in the financial statements but disclosure of which is necessary to make the financial statements not misleading. In the present case, Mr. J has come across information that a loan of Rs. 15 lakhs has been taken by the company from Provident Fund. This is contravention of rules and the said loan has not been reflected in the books of accounts. Further, this material fact has also to be disclosed in the financial statements.

Mr. J has failed to disclose this fact in his report. Therefore, he is attracted by the provisions of professional misconduct under Clause (5) of Part I of Second Schedule to the Chartered Accountants Act, 1949.

Case 6 - A chartered accountant in practice created his own website in attractive format and colours and circulated the information contained in the website through E-mail.

Answer: Creation of Own Website by a Chartered Accountant/Firm of Chartered

Accountants: The guidelines approved by the Council of the Institute of Chartered Accountants of India permits creation of own website by a chartered accountant in his or his firm name and no standard format or restriction on colours is there. The chartered accountant or firm, as per the guidelines, should ensure that none of the information contained in the website be circulated on their own or through E-mail or by any other mode except on a specific “Pull” request.

Since in the given case, the chartered accountant circulated the information contained in the website through E-mail, he is guilty of misconduct under Clause (6) of Part I of the First Schedule to the Chartered Accountants Act, i.e., a chartered accountant in practice is deemed to be guilty of professional misconduct if he solicits client or professional work either directly or indirectly, by circular, advertisement, personal communication or interview or by any other means.

Case 7 - Z, a Chartered Accountant wrote several letters to Government Department, pointing out seniorty of his firm, sending his life sketch and stating that he had a glorious record of service to the country as well as to the organization of accountancy profession with a view to get the audit work.

Answer: Solicitation of Professional Work Through Letters: ‘Z’ a chartered accountant, wrote several letters to Government Department pointing out the seniority of his firm and sending his life sketch and stating that he had rendered glorious service to the country and to the accountancy profession with a view to getting the audit work. Clause (6) of Part I of First Schedule to the Chartered Accountants Act, 1949 prohibits a member not to solicit professional work by means of advertisement, circular, personal communication or interview or by any other means. Since these letters were clearly in the nature of advertising professional attainments, “Z” was guilty of professional misconduct under Clause (6) of Part I of First Schedule to the Chartered Accountants Act, 1949.

Case 8 - A chartered accountant holding certificate of practice and having four articled clerks registered under him accepts appointment as a full-time lecturer in a college. Also he becomes a partner with his brother in a business. Examine his conduct in the light of Chartered Accountants Act, 1949 and the regulations thereunder.

Answer: Clause (11) of Part I of the First Schedule to the Chartered Accountants Act, 1949 debars a chartered accountant in practice from engaging in any business or occupation other than the profession of chartered accountancy unless permitted by the Council of the Institute so to engage. This clause, in effect, has empowered the Council of the Institute to permit chartered accountants in practice to engage in any other business or occupation considered fit and proper. Accordingly, the Council had formulated Regulations 190A and 191 to the Chartered Accountants Regulations, 1988 to provide a basis for considering applications of chartered accountants seeking permission to engage in other business or occupation. A member can accept full - time lecturer-ship in a college only after obtaining the specific and prior approval of the Council. As also becoming a partner in a business with his brother would require specific permission the chartered accountant is liable for professional misconduct since he failed to obtain specific and prior approval of the Council in each case.

Case 9 - Mr. Qureshi, Chartered Accountant, in practice died in a road accident. His widow proposes to sell the practice of her husband to Mr. Pardeshi, Chartered Accountant, for Rs. 5 lakhs. The price also includes right to use the firm name- Qureshi and Associates. Can widow of Qureshi sell the practice and can Mr. Pardeshi continue to practice in that name as a proprietor?

Answer: Sale of Goodwill: With reference to Clause (2) of Part I to the First Schedule to Chartered Accountants Act, 1949, the Council of the Institute of Chartered Accountants of India had an occasion to consider whether the goodwill of a proprietary concern of chartered accountant can be sold to another member who is otherwise eligible, after the death of the proprietor. It lay down that the sale is permitted subject to certain conditions. It further resolved that the legal heir of the deceased member has to obtain the permission of the Council within a year of the death of the proprietor concerned. Thus, in a given case and on the facts, the widow of Mr. Qureshi, who has sold the practice for Rs. 5 lakhs is nothing but sale of goodwill. Thus the act of Mrs. Qureshi is permissible.

Case 10 - Mr. Parekh, a Chartered Accountant was invited by the Chamber of Commerce to present a paper in a symposium on the issues facing Indian Leather Industry after the post COVID-19 condition. During the course of his presentation he shared some of the vital information of his client’s business under the impression that it will help the Nation to compete with other countries at international level.

Answer: Disclosure of Client’s Information: Clause (1) of Part I of the Second Schedule to the Chartered Accountants Act, 1949 deals with the professional misconduct relating to the disclosure of information by a chartered accountant in practice relating to the business of his clients to any person other than his client without the consent of his client or otherwise than as required by any law for the time being in force would amount to breach of confidence. The Code of Ethics further clarifies that such a duty continues even after completion of the assignment. The Chartered Accountant may however, disclose the information in case it is required as a part of performance of his professional duties. In the given case, Mr. Parekh has disclosed vital information of his client's business without the consent of the client under the impression that it will help the nation to compete with other countries at International level. Thus it is a professional misconduct covered by Clause (1) of Part I of Second Schedule to the Chartered Accountants Act, 1949.

References:

- Chartered Accountants Act, 1949
- ICAI Study Material
- FAQs on Ethical Issues, ICAI
- Practice Manual, ICAI

Audit in Computerised Environment

(Prepared by: Atanu Pramanick)

Concept

Now a day, the corporate world is getting more and more inclined towards the use of information technology in their daily operations. This has changed the way in which the organizations carry out their operations and various business processes. Auditing in Computerised Information System (CIS) Environment discusses the procedure to be followed when an audit is conducted in a CIS environment. Auditing in a CIS environment even though has not changed the fundamental nature of auditing; it has definitely caused substantial changes in the method of evidence collection and evaluation. This also requires auditors to become knowledge about computer environment (hardware, software etc) and keep pace with rapidly changing technology, even to the extent of using sophisticated Audit software.

Difference between Auditing of manual accounts and Computerized Accounts

Basis	Conventional Accounting System	Computer Based Accounting System
Complexity	Simple. Therefore, it can be understood by the auditor quickly	Complex. Requires technical expertise and lot of time to understand it.
Audit trail	Includes source document, journal entries, ledgers, trial balance and other records	Consists of magnetic tapes, punch cards, discs, printouts, etc. There is a lack of audit trail
Internal control system	Based on segregation of duties essentially	Based on separation of knowledge
Audit planning	Scheduling is not very tight	Involves tighter scheduling because the client has to make arrangements to provide auditor access to computer system and make available various files
Consequences of error	Errors are stochastic and can be corrected on the basis of feedback given by the auditor	Errors are deterministic. Extensive redesigning and reprogramming may be required to correct them

Scope of Audit in a CIS Environment

Impact of computerisation on audit approach needs consideration of the following factors

1. **High speed**: In a CIS environment information can be generated very quickly. Even complex reports in specific report format can be generated for audit purposes without much loss of time. This cut down the time enabling the auditor to extend their analytical review for under coverage with high speed of operation, the Auditor can expand their substantive procedures for collection of more evidence in support of their judgment.
2. **Low clerical error**: Computerised operation being a systematic and sequential programmed course of action the changes of commission of error is considerably reduced. Clerical error is highly minimized.
3. **Concentration of duties**: In a manual environment the auditor needs to deploy separate individuals for carrying out the verification process. In a CIS environment, the traditional approach does not apply in many cases, as computer programs perform more than one set of activities at a time thereby concentrating the duties of several personnel involved in the work.
4. **Application systems development control**: Systems development control should be designed to provide reasonable assurance that they are developed in an authorised and efficient manner, to establish control, over:

a. Testing, conversion, implementation, and documentation of new revised system.
b. Changes to application system.
c. Access to system documentation.

d. Acquisition of application system from third parties.

5. **Systems software control**: Systems controls are designed to provide software reasonable assurance that system software is acquired or developed in an authorised and efficient manner including:

a. Authorisation, approval testing, implementation and documentation of new system software systems software modifications.

b. Putting restriction of access to system software and documentation to authorized personnel.

6. **Disappearance of manual reasonableness**: The shift from traditional manual information processing environment to computerised information systems environment needs a detailed analysis of the physical system for transformation into a logical platform. In creating such logical models many stages required under manual operations are either deleted or managed to create a focused computer system. In such creative effort, the manual reasonableness may be missing.

7. **Impact of poor system**: System analysis and designs falls short of expected standard of performance, a computerised information system environment may do more harm to integrated business operation than good. Thus, care has to be taken in adopting manual operations switch- over to computerised operations for ensuring performance quality standards.

8. **Exception reporting:** This is a part of Management information system. Exception Reporting is a departure from straight reporting of all variables. Here the value of a variable is only reported if it lies outside some pre-determined normal range. This form of reporting and analysis is familiar to the accountant. The main strength of exception reporting lies in its recognition that to be effective information must be selectivity provided.

9. **Man-machine interface / human-computer interaction:** Man-machine interface ensures maximum effectiveness of the information system. Organisation concentrated on presenting information that is required by the user and to present that information in the most uncluttered way. It is required to determine what information was necessary to achieve through a careful analysis of the job or task for which the user needed the information. Human-computer interaction is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of the major phenomena, surrounding them. The approach is user centered and integrates knowledge from a wide range of disciplines.

Audit Approach in a CIS Environment

Based on The knowledge and expertise of Auditors in handling computerised data, the audit approach in a CIS environment could be either.

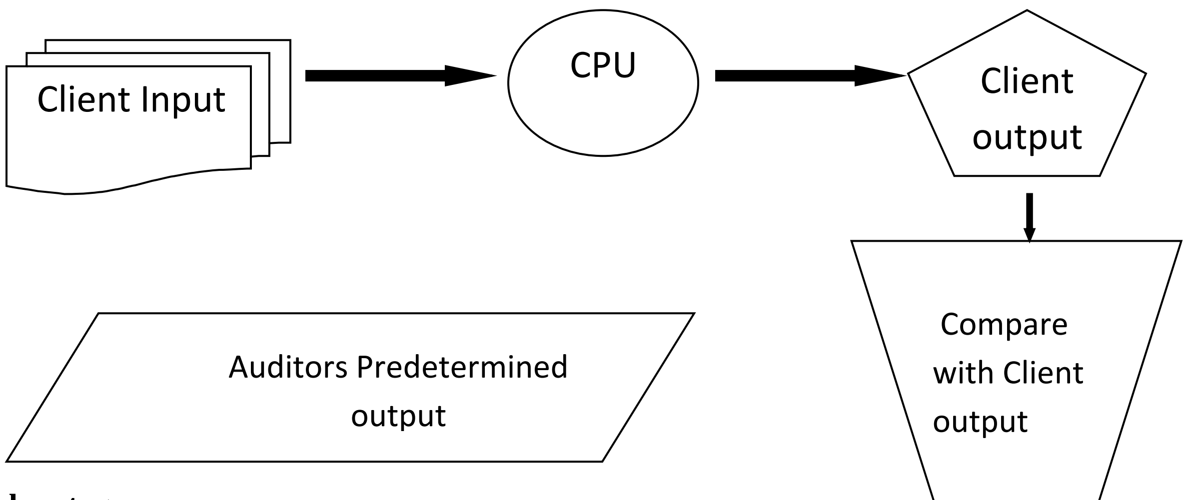
- A Black-box approach i.e. Auditing around the computer, or
- A White-box approach i.e. Auditing through the computer.

A. **The Black Box Approach:**

The auditor treats the computer as a black box i.e. concentrates on input and output and ignores the data processing. He assumes if inputs and outputs are correct, processing would be accurate. For example, the auditor might first examine the time cards for hours spent by the workers and organizational records specifying the rate for payment of workers (input), then trace these to wage sheet (output) and compare the two. This comparison can be done manually or with the help of computer. The auditor is, therefore, relying on the controls in user department.

In testing, say, Payroll Application, the auditor might first examine selected time cards for hours worked and employee earning cards for rates and then trace these to the payroll summary output and finally compare hours, rates and extensions. The comparison of inputs and outputs may be done manually with the assistance of the computer.

Auditing Around the Computer



Advantages:

The computer assisted approach has the advantage of permitting the auditor to make more comparisons than would be possible, if done manually. Auditing around the computer has the advantage of ease of comprehension as the tracing of documents to output does not require any in-depth study of application program.

- **i.** Audit cost is low
- **ii.** Requires limited computer knowledge

Disadvantages:

A major disadvantage, however, is that the auditor not having directly tested the control, cannot make assertions about the underlying process. Moreover, in some of the more complex computer systems intermediate printout may not be available for making the needed comparisons.

- **i.** May be expensive as printing of lot of data is required
- **ii.** Time consuming
- **iii.** It ignores the huge potential of computers to help the auditor

Suitability: This approach is suitable when

- **i.** The application controls are difficult to comprehend. The auditor can test the computer processes by feeding hypothetical data in the computer for which manual solution is available. Comparison of such a solution can be made with computer generated output and if no material discrepancies are noted, the auditor can use this approach
- **ii.** Audit trail is available

B. The White Box Approach

When the use of computer is made by the auditor to carry out compliance and substantive procedure, it is called auditing 'through' the computer or the White Box Approach. He focuses upon all phases of CIS activities viz, input, processing and output. The auditor reviews and tests general and application controls and determines their effectiveness and then determines the nature, timing and extent of substantive procedure. The processes and controls surrounding the subject are not only subject to audit but also the processing controls operating over this process are investigated. In order to help the auditor to gain access to these processes computer Audit software may be used.
For example, to vouch payment of wages and salaries, the auditor would use various general and application controls such as record counts, limit tests and check digits, hardware controls, access controls etc.

The process of auditing is not a straight forward flow of work from start to finish to be completed by satisfying oneself against a standard checklist or a list of questions. It involves exposure, experiences and application of knowledge and expertise to differing circumstances. No two information system is same. From the view point of analysis computerised information of system, auditors need not only have adequacy on knowledge regarding information requirement and computer data security they must also get exposed to system and as post implementation.

Advantages:

- **i.** Reduces cost as print outs are not required
- **ii.** Helps to reduce audit hours
- **iii.** Online transactions can be easily recorded

Disadvantages:

This approach requires that the auditor should have sufficient knowledge of computers, its programmes, process and controls.

Suitability:

Auditing through the computer may be used in many situations. Some examples are given below:

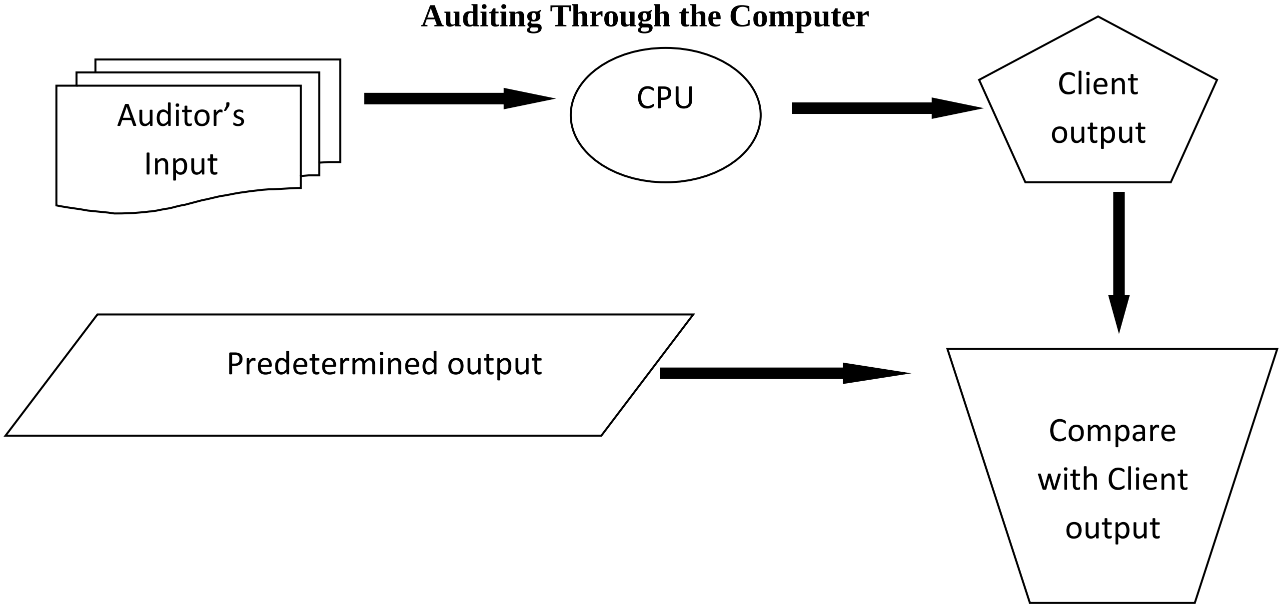
- **i.** The application system processes large volume of input and produces large volumes of output e.g. cash sales in a big departmental store.

ii. Significant parts of the internal control system are embodied in computer batch transactions for individual tellers to provide control totals for reconciliation at the end of day's processing

iii. To make processing more efficient e.g. EDP system may be used to scan accounts receivable balances for amounts exceeding the credit limit and even for confirming receivable accounts random sampling tables might be used to select sample.

iv. To facilitate analysis e.g. the auditor may summarize inventory turnover statistics to determine slow moving inventory items with the help of software.

Auditing Through the Computer



Effects of Computers on Auditing

The objective of auditing, do not undergo a sea change in a CIS environment. Auditor must provide a competent, independent opinion as to whether the financial statements records and report a true and fair view of the state of affairs of an entity. However, computer systems have affected how auditors need to collect and evaluate evidence. These aspects are discussed below:

1. **Changes to Evidence Collection-** Collecting evidence on the reliability of a computer system is often more complex than collecting evidence on the reliability of a manual system. Auditors have to face a diverse and complex range of internal control technology that did not exist in manual system, like:

a. Accurate and complete operations of a disk drive may require a set of hardware controls not required in manual system,

b. System development control includes procedures for testing programs that again are not necessary in manual control.

Since, Hardware and Software develop quite rapidly, understanding the control technology is not easy. With increasing use of data communication for data transfer, research is focused a cryptographic controls to project the privacy of data.

Unless auditor's keep up with these developments, it will become difficult to evaluate the reliability of communication network competently. The continuing and rapid development of control technology also makes it more difficult for auditors to collect evidence on the reliability of controls. Even collection of audit evidence through manual means is not possible. Hence, auditors have to run through computer system themselves if they are to collect the necessary evidence. Though generalized audit softwares are available the development of these tools cannot be relied upon due to lack of information. Often auditors are forced to compromise in some way when performing the evidence collection

2. **Changes to Evidence Evaluation-** With increasing complexity of computer systems and control technology, it is becoming more and more difficult for the auditors to evaluate the consequences of strength and weaknesses of control mechanism for placing overall reliability on the system. Auditors need to understand:

a. Whether a control is functioning reliably or multi functioning,

b. Traceability of control strength and weakness through the system. In a shared data environment a single input transaction may update multiple data item used by diverse physically disparate user, which may be difficult to understand.

Consequences of errors in a computer system are serious matters as errors in computer an erroneous program will always execute system tend to be deterministic, i.e., an erroneous program will always execute data incorrectly. Moreover, the errors are generated at high speed and the cost and effort to correct and rerun program may be high. Errors in computer program can involve extensive redesign and reprogramming. Thus, internal controls that ensure high quality computer systems should be designed implemented and operated upon. The auditors must ensure that these control are sufficient to maintain assets safeguarding, data integrity, system effectiveness and system efficiency and that they are in position and functioning.

Computer Assisted Audit Techniques (CAATs)

Computer Assisted Audit Techniques (CAATs) are computer programmes and data that the auditor uses as part of the audit procedures to process data of audit significance, contained in an entity's information systems. The overall objectives and scope of an audit do not change when an audit is conducted in a Computer Information Systems (CIS) environment. The application of auditing procedures is however, the auditor to consider techniques known as Computer Assisted Techniques (CAATs) that use the computer as an audit tool for enhancing the effectiveness and efficiency of audit procedures.

Reason for using CAAT

The use of CAATs may be required because

i. The auditor may not be able to examine documentary evidence because of the absence of input documents (e.g. order entry in online systems) or the generation or accounting transactions by computer programme (e.g. automatic calculation of discounts)

ii. The auditor will not be able to follow transactions through computerized accounting system because of lack of visible audit trail; and

iii. The lack of visible output may necessitate access to data retained on files readable only by the computer

Advantages of CAATs

i. CAATs allow the auditor to give access to data without dependence on the client, test the reliability of audit software and perform audit tests more efficiently

ii. CAATs may be used in performing audit procedures such as-

- Test of details of transactions and balances, for examples, the use of audit software for recalculating interest or the extraction of invoices over a certain value from computer records
- Analytical procedures, for example, identify inconsistencies or significant fluctuations
- Sampling programs to extract data for audit testing
- Re-performing calculations performed by the entity’s accounting systems

Uses of CAATs

CAAT's may be used in performing various auditing procedures, including the following:

- Tests of details of transactions and balances, for example, the use of audit software for recalculating interest or the extraction of invoices over a certain value from computer records
- Analytical procedures, for example, identifying inconsistencies or significant functions
- tests of general controls, for example, testing the set-up or configuration of the operating system or access procedures to the program libraries or by using code comparison software to check that the version of the program in use is the version approved by management
- Sampling programs to extract data for audit testing,
- Tests of application controls, for example, testing the functioning of a programmed control and
- Re-performing calculations performed by the entity's accounting systems.

Some Techniques of CAAT

(i) Test data approach-

- **a.** Auditor prepares transaction data (test data, also called test pack) and processes it on the client's processing system under his control
- **b.** If results of processing match with the pre-determined output, this indicated that all the application and general controls are functioning properly
- **c.** Test data should test each control on which he wishes to rely
- **d.** *Advantages:* reliable, easy to use and long term economies
- **e.** *Disadvantages:* additional work for the auditor, difficulty in designing test data and high initial cost

(ii) Integrated test data approach-

- **a.** The auditor creates fictitious entries within the client's actual data
- **b.** Hypothetical data for fictitious transactions are, thus, integrated with actual client data and processed
- **c.** Subsequently, it is removed by reversing journal entries or through programme commands and then financial reports are compiled
- **d.** *Advantages*: provides assurance that the programmes being tested by the auditor, have actually been used by the client, long term economies and can be precisely targeted for specific procedures within the programmes
- **e.** *Disadvantages:* difficult to ensure that fictitious transactions does not impact actual results, errors may be detected but not well laid frauds difficult to detect and high initial cost

(iii) Generalized audit software (GAS):

- **a.** Audit programmes are designed by computer manufacturers, software professionals and large firm of auditors.
- **b.** The functions that can be performed with GAS include:
  - Examination and review of records based on auditor's criteria
  - Selecting and printing audit samples
  - Testing calculations and making comparisons
  - Comparing data on separate files
  - Summarizing data and performing analysis; and
  - Comparing audit data with client's records
- **c.** *Advantages:* assist auditor to carry out compliance and substantive procedures, examines each transaction and reliability
- **d.** *Disadvantages:* limited by the availability of client's data, auditor's ingenuity and strength of client's internal control system.

<u>Reference:</u>

- ICAI Study Material

Government Audit

(Prepared by: Atanu Pramanick)

Concept

Government Audit is independent and unbiased nature of audit of Government activities. The concept, content and scope of government audit have developed in tune with the political, social and economic development of the countries. It tries to ensure accountability of the executive in respect of public revenue and expenditure. In a democracy, those holding power and positions of responsibility must be answerable for their actions. Primarily, the Parliament and in case of States, the State legislatures control all government expenditure through insistence upon demand for grants. After the expenditure has been incurred and the accounts are closed, the Appropriation Accounts are prepared which are scrutinised by the Public Accounts Committee. Thus Parliamentary or Legislative control is exercised before spending and after the expenditure actually incurred.

Since independence there has been a tremendous spurt in governmental activities with the attendant increase in expenditure, revenue and capital, and in receipts and borrowings to match the expenditure. Government has entered the business field. Audit has evolved from accountancy and regularity check to evaluation of the end results of the operations of government.

Initially, government auditing in India as elsewhere was primarily expenditure-oriented. Gradually, audit of receipts-tax and non-tax was taken up. With the rapid growth of public enterprises, another major area of specialisation, *i.e.*, commercial audit came into being. There are also a large number of non-commercial autonomous bodies financed by government in diverse fields of development and of academic study and scientific or social research which are also required to be audited from the viewpoint of public accountability. The U.N. Handbook on Government Auditing and Developing Countries define government auditing in a comprehensive manner which is as follows:

Government auditing is the objective, systematic, professional and independent examination of financial, administrative and other operations of a public entity made subsequently to their execution for the purpose of evaluating and verifying them, presenting a report containing explanatory comments on audit findings together with conclusions and recommendations for future actions by the responsible officials and in the case of examination of financial statements, expressing the appropriate professional opinion regarding the fairness of the presentation.

Government audit serves as a mechanism or process for public accounting of government funds. It also provides public accounting of the operational, management, programme and policy aspects of public administration as well as accountability of the officials administering them. Audit observations based on factual data collection also serve to highlight the lapses of the lower hierarchy, thus helping supervisory level officers to take corrective measures. The main objective of audit is a combination of ensuring accountability of administration to legislature and functioning as an aid to administration.

In India, the function of audit is discharged by the independent statutory authority of the Comptroller and Auditor General through the agency of the Indian Audit and Accounts Department. The Comptroller and Auditor General (C&AG), in the discharge of his functions, watches that the various authorities act in regard to financial matters in accordance with the Constitution and the laws made by Parliament, and conform to the rules or orders made thereunder.

Legal Framework and Comptroller & Auditor General

The Constitution of India contains specific provisions regarding the appointment, salary and duties and powers of the C&AG. The constitution guarantees the independence of the C&AG of India by prescribing that he shall be appointed by the President of India and shall not be removed from office except on the ground of proven mis-behaviour or incapacity, similar as a Judge of the Supreme Court. The Parliament is competent to make laws to determine salary and other conditions of service and they cannot be varied to his disadvantage after his appointment. The Constitution further provides that the conditions of service of person serving in the Indian Audit and Accounts Department and the administrative powers of the C&AG shall be determined by the President after consultation with him.

Comptroller and Auditor General's — Duties and Powers

Article 149 states that the C&AG shall perform such duties and exercise such powers in relation to the accounts of the Union and of the States and of any other authority or body as may be prescribed by or under any law made by the Parliament. The Comptroller & Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 (C&AG Act) defines these functions and powers in detail. The relevant provisions are discussed hereunder—

- **Duties of the C&AG:**

(i) Compile and submit Accounts of Union and States - The Comptroller and Auditor General shall be responsible for compiling the accounts of the Union and of each State. The Comptroller and Auditor General shall, from the accounts compiled by him [or by the Government or any other person responsible in that behalf] prepare in each accounts (including, in the case of accounts compiled by him, appropriation accounts) showing under the respective heads the annual receipts and disbursements for the purpose of the Union, of each State and of each Union Territory having a Legislative Assembly, and shall submit those accounts to the President or the Governor of a State or Administrator of the Union Territory having a Legislative Assembly, as the case may be, on or before such dates as he may, with the concurrence of the Government concerned, determine.

(ii) Give information and render assistance to Union and States - The Comptroller and Auditor General shall, in so far as the accounts, for the compilation or keeping of which he is responsible, enable him so to do, give to the Union Government, to the State Government or to the Governments of Union Territories having Legislative Assemblies, as the case may be, such information as they may, from time to time, require and render such assistance in the preparation of the annual financial statements as they may reasonably ask for.

(iii) **General Provisions Relating to Audit -** It shall be the duty of the Comptroller and Auditor General—

(a) to audit and report on all expenditure from the Consolidated Fund of India and of each State and of each Union Territory having a Legislative Assembly and to ascertain whether the moneys shown in the accounts as having been disbursed were legally available for and applicable to the service or purpose to which they have been applied or charged and whether the expenditure conforms to the authority which governs it;
(b) to audit and report all transactions of the Union and of the States relating to Contingency Funds and Public Accounts;
(c) to audit and report on all trading, manufacturing and profit and loss accounts and balance-sheets and other subsidiary accounts kept in any department of the Union or of a State.
(iv) Audit of Receipts and Expenditure of bodies or authorities substantially financed from Union or State Revenues- Where any body or authority is substantially financed (in a financial year if it is not less than rupees twenty-five lakhs and the amount of such grant or loan is not less than seventy-five per cent of the total expenditure of that body or authority) by grants or loans from the Consolidated Fund of India or of any State or of any Union Territory having a Legislative Assembly, the Comptroller and Auditor General shall, subject to the provisions of any law for the time being in force applicable to the body or authority, as the case may be, audit all receipts and expenditure of that body or authority and to report on the receipts and expenditure audited by him.
(v) Grants or Loans given to other authorities or bodies - Where any grant or loan is given for any specific purpose from the Consolidated Fund of India or of any State or of any Union Territory having a Legislative Assembly to any authority or body, not being a foreign State or international organisation, the

Comptroller and Auditor General shall scrutinise the procedures by which the sanctioning authority satisfies itself as to the fulfillment of the conditions subject to which such grants or loans were given and shall for this purpose have right of access, after giving reasonable previous notice, to the books and accounts of that authority or body.

(vi) Audit of Receipts of Union or States - It shall be the duty of the Comptroller and Auditor General to audit all receipts which are payable into the Consolidated Fund of India and of each State and of each Union Territory having a Legislative Assembly and to satisfy himself that the rules and procedures in that behalf are designed to secure an effective check on the assessment, collection and proper allocation of revenue and are being duly observed and to make for this purpose such examination of the accounts as he thinks fit and report thereon.

(vii) Audit of Accounts of Stores and Inventory - The Comptroller and Auditor General shall have authority to audit and report on the accounts of stores and inventory kept in any office or department of the Union or of a State.

(viii) Audit of Government Companies and Corporations - The duties and powers of the Comptroller and Auditor General in relation to the audit of the accounts of government companies shall be performed and exercised by him in accordance with the provisions of the Companies Act, 2013.

Powers of C&AG:

The C&AG Act gives the following powers to the C&AG in connection with the performance of his duties-

(i) To inspect any office of accounts under the control of the Union or a State Government including office responsible for the creation of the initial or subsidiary accounts.

(ii) To require that any accounts, books, papers and other documents which deal with or are otherwise relevant to the transactions under audit, be sent to specified places.

(iii) To put such questions or make such observations as he may consider necessary to the person in charge of the office and to call for such information as he may require for the preparation of any account or report which is his duty to prepare.

In carrying out the audit, the C&AG has the power to dispense with any part of detailed audit of any accounts or class of transactions and to apply such limited checks in relation to such accounts or transactions as he may determine.

Expenditure Audit

The audit of government expenditure is one of the major components of government audit. The basic standards set for audit of expenditure are to ensure that there is provision funds authorised by competent authority fixing the limits within which expenditure can be incurred. These standards are—

(i) that the expenditure incurred conforms to the relevant provisions of the statutory enactment and in accordance with the Financial Rules and Regulations framed by the competent authority. Such an audit is called as the audit against 'rules and orders'.

(ii) that there is sanction, either special or general, accorded by competent authority authorising the expenditure. Such an audit is called as the audit of sanctions.

(ii) that there is a provision of funds out of which expenditure can be incurred and the same has been authorised by competent authority. Such an audit is called as audit against provision of funds.

(iv) that the expenditure is incurred with due regard to broad and general principles of financial propriety (such as the wisdom, faithfulness and economy of transactions). Such an audit is also called as propriety audit.

(v) that the various programmes, schemes and projects where large financial expenditure has been incurred are being run economically and are yielding results expected of them. Such an audit is termed as the performance audit.

Audit of Receipts

The Audit of Receipts provides for checking; (i) whether all revenues or other debts due to government have been correctly assessed, realised and credit to government account by the designated authorities; (ii) whether adequate regulations and procedures have been framed by the department/agency concerned to secure an effective check on assessment, collection and proper allocation of cases; (iii) whether such regulations and procedures are actually being carried out; (iv) whether adequate checks are imposed to ensure the prompt detection and investigation of irregularities, double refunds, fraudulent or forged refund vouchers or other loss of revenue through fraud or willful omission or negligence to levy or collect taxes or to issue refunds; and (v) review of systems and procedures and to suggest improvement. The basic principle of audit of receipts is that it is more important to look at the general than on the particular, though individual cases of assessment, demand, collection, refund, etc. are important within the area of test check. A review of the judicial decisions taken by tax authorities is done to judge the effectiveness of the assessment procedure.

Role of C&AG under the Companies Act, 2013

Section 143(5) of the Companies Act, 2013 states that, in the case of a Government company or any other company owned or controlled, directly or indirectly, by the Central Government, or by any State Government or Governments, or partly by the Central Government and partly by one or more State Governments, the Comptroller and Auditor-General of India shall appoint the auditor under sub-section (5) or sub-section (7) of section 139 i.e. appointment of First Auditor or Subsequent Auditor and direct such auditor the manner in which the accounts of the Government company are required to be audited and thereupon the auditor so appointed shall submit a copy of the audit report to the Comptroller and Auditor-General of India which, among other things, include the directions, if any, issued by the Comptroller and Auditor-General of India, the action taken thereon and its impact on the accounts and financial statement of the company.

The Comptroller and Auditor-General of India shall within sixty days from the date of receipt of the audit report have a right to,

(a) conduct a supplementary audit under section 143(6)(a), of the financial statement of the company by such person or persons as he may authorize in this behalf; and for the purposes of such audit, require information or additional information to be furnished to any person or persons, so authorised, on such matters, by such person or persons, and in such form, as the Comptroller and Auditor-General of India may direct; and

(b) comment upon or supplement such audit report under section 143(6)(b): Any comments given by the Comptroller and Auditor-General of India upon, or supplement to, the audit report shall be sent by the company to every person entitled to copies of audited financial statements under sub-section (1) of section 136 i.e. every member of the company, to every trustee for the debenture-holder of any debentures issued by the company, and to all persons other than such member or trustee, being the person so entitled and also be placed before the annual general meeting of the company at the same time and in the same manner as the audit report.

Test Audit under section 143(6)(b): Further, without prejudice to the provisions relating to audit and auditor, the Comptroller and Auditor- General of India may, in case of any company covered under sub-section (5) or sub-section (7) of section 139, if he considers necessary, by an order, cause test audit to be conducted of the accounts of such company and the provisions of section 19A of the Comptroller and Auditor-General's (Duties, Powers and Conditions of Service) Act, 1971, shall apply to the report of such test audit.

As stated above, in the case of a government company, audit is conducted by professional auditors appointed on the advice of the C&AG and the later is authorised under section 143 of the Companies Act, 2013 to conduct supplementary or test audit.

The C&AG shall direct the manner in which the company's accounts shall be audited by the statutory auditors and give such auditors instructions in regard to any matter relating to the performance of his functions as such. The directions under section 143(6)(a) broadly covers the system of book-keeping and accounts, internal control etc.

The statutory auditors shall submit a copy of their audit report to the C&AG who shall have a right to comment upon or supplement the audit report submitted by the statutory auditors in such manner as he may think fit. Section 134(3) of the Companies Act, 2013 imposes a duty on the board of directors of a company to give an explanation or comments on every reservation, or adverse remarks or disclaimer contained in the auditors' report and secretarial audit report of the Company Secretary in practice. In the absence of similar provisions requiring the company to give reply on the reservation made by the C&AG, the board of directors of such a company is not bound to give information or explanation in respect of such comments.

The general standards, principles, techniques and procedures for audit adopted by the C&AG are a mixture of government audit and commercial audit as known and practiced by professional auditors. The concepts of autonomy and accountability of the institution / bodies / corporations / companies have influenced the nature and scope of audit in applying the conventional audit from the angle of economy, efficiency and effectiveness.

Reporting Procedures

Article 150 of the Constitution provides that the accounts of the Union and of the States shall be kept in such form as the President may on the advice of the C&AG prescribed.

Article 151 requires that the reports of the C&AG relating to the accounts of the Union/State shall be submitted to the President/Governor who shall cause them to be laid before House of Parliament/State Legislature.

The effectiveness of an audit depends on reporting results to the proper authority so that appropriate action may be taken to rectify the irregularities or impropriety where possible or to prevent re-occurrence. The right as also the obligation to report on the results of audit findings is inherent to the institution of the Auditor General and is usually safeguarded in the Constitution and related enactments. Article 151 of the Indian Constitution enjoins that the C&AG shall report on the accounts of the Union and of each of the States to the President or the Governor concern and the letter shall cause the report to be laid before the legislatures. The reports should not only be presented to the legislatures but thereafter also publicised adequately in order to create a proper climate of public opinion for taking remedial action where necessary, on the findings of the Auditor General. This may also constitute a more effective safeguard in the future.

In India the reporting is factual and the conclusions are left to be drawn by the reader. This is presumably to ensure total objectivity. Nothing debars C&AG from making recommendations in the audit report but traditionally this has been left to be done by the Public Accounts Committee. The overall Indian position regarding reporting standards contained in instructions issued by the C&AG on the subject. Experience and professional judgment ultimately determines what is to be included in the audit reports. The auditor has to be a thorough professional and the audit reports have to be prepared with great skill for both the presentation and contents should compel readership.

References:

- The Comptroller and Auditor-General's (Duties, Powers and Conditions of Service) Act, 1971
- ICAI Study Material

Audit of Local Bodies

(Prepared by: Atanu Pramanick)

Concept

Local bodies are institutions of the local self governance, which look after the administration of an area or small community such as villages, towns, or cities. The Local bodies in India are broadly classified into two categories. The local bodies constituted for local planning, development and administration in the rural areas are referred as Rural Local Bodies (Panchayats) and the local bodies, which are constituted for local planning, development and administration in the urban areas, are referred as Urban Local Bodies (Municipalities). By the term 'local self-government' is ordinarily understood the administration of a locality – a village, a town, a city or any other area smaller than a state – by a body representing the local inhabitants, possessing fairly large autonomy, raising at least a part of its revenue through local taxation and spending its income on services which are regarded as local and, therefore, distinct from state and central services.

The many roles that the local government is expected to play today include:

- A Regulator, namely the administration of various acts and regulations
- A Provider, that involves providing urban services efficiently and equitably by managing its

accounts effectively and efficiently.

- An Agent, that takes the schemes of higher levels government to the people. This includes promotion of popular participation
- A Welfare Agency, which provides active assistance to higher level governments in the equitable distribution and delivery
- An Agent of Development, who strives for improvement in the quality of life through the augmentation of infrastructure.

Objective of Audit of Local Bodies

The external control of expenditure is exercised by the state governments through the appointment of auditors to examine accounts. The important objectives of audit are:

- reporting on the fairness of the content and presentation of financial statements;
- reporting upon the strengths and weaknesses of systems of financial control;
- reporting on the adherence to legal and/or administrative requirements;
- reporting upon whether value is being fully received on money spent; and
- detection and prevention of error, fraud and misuse of resources.

Audit is another method of financial control on local governments. In addition to the external audit a system of internal audit enhance the level of effectiveness.

Audit Programme for local bodies

The auditor while auditing the local bodies should report on the fairness of the contents and presentation of financial statements, the strengths and weaknesses of system of financial control, the adherence to legal and/or administrative requirements; whether value is being fully received on money spent. His objective should be to detect errors and fraud and misuse of resources.

The auditor should ensure that the expenditure incurred conforms to the relevant provisions of the law and is in accordance with the financial rules and regulations framed by the competent authority.

He should ensure that all types of sanctions, either special or general, accorded by the competent authority.

He should ensure that there is a provision of funds and the expenditure is incurred from the provision and the same has been authorized by the competent authority.

The auditor should check that the different schemes, programmes and projects, where large financial expenditure has been incurred, are running economically and getting the expected results.

References:

- ICAI Study Material
- www.mospi.nic.in

Audit of Not-for-Profit Organisation

(Prepared By: Atanu Pramanick)

Concept

NGOs can be defined as non-profit making organisations which raise funds from members, donors or contributors apart from receiving donation of time, energy and skills for achieving their social objectives like imparting education, providing medical facilities, economic assistance to poor, managing disasters and emergent situations. Therefore, this definition of NGO would include religious organisations, voluntary health and welfare agencies, charitable organisations, hospitals, old age homes, research foundations etc. The scope of services rendered by NGOs is extremely wide and as such cannot be covered in a small definition.

Non-Governmental Organisations are generally incorporated as societies under the Societies Registration Act, 1860 or as a trust under the India Trust Act, 1882, or under any other law corresponding to these Laws enforced in any part of India. NGOs can also be incorporated as a company under section 8 of the Companies Act, 2013. None of the above mentioned Act warrant a mandatory registration under them for an NGO. NGOs registered under the Companies Act, 2013 must maintain their books of account under the accrual basis as required by the provisions of section 128 of the said Act. If the accounts are not maintained on accrual basis, it would amount to non-compliance of the provision of the Companies Act, 2013. The NGOs which are not registered under the Companies Act, 2013 are allowed to maintain accounts either an accrual basis or cash basis.

The main sources of funds include grants and donations, fund raising programmes, advertisements, fees from the members, technical assistance fees / fee for services rendered, subscriptions, gifts, sale of produce or publications, etc.

Provisions Relating to Audit

The auditors of an NGO registered under the Societies Registration Act, 1860 (or under any law corresponding to this Act, in force in any part of India) or the Indian Trusts Act 1882 is normally appointed by the Management of the Society or Trust. The auditors of NGO registered under section 8 of the Companies Act, 2013 are appointed by the members of the company. Some of the statues such as the Companies Act, 2013, Foreign Contribution (Regulation) Act 1976, Income Tax Act 1961 required that the accounts of the NGO be audited and submitted to the prescribed authorities and failure to do so could lead to forfeiture of certain exemptions and benefits. In the case of NGO different statutes have specified certain audit reports. The Foreign Contribution (Regulation) Act 1976 has prescribed the format and requires that the same be furnished to the Ministry of Home Affairs within 60 days from the close of the financial year i.e. by May 30 each year.

Audit Programme

While planning the audit, the auditor may concentrate on the following:

- Knowledge of the NGO's work, its mission and vision, areas of operations and environment in which it operate.
- Updating knowledge of relevant statutes especially with regard to recent amendments, circulars, judicial decisions viz. Foreign Contribution (Regulation) Act 1976, Societies Registration Act, 1860, Income Tax Act 1961 etc. and the Rules related to the statutes.
- Reviewing the legal form of the Organisation and its Memorandum of Association, Articles of Association, Rules and Regulations.
- Reviewing the NGO's Organisation chart, then Financial and Administrative Manuals, Project and Programme Guidelines, Funding Agencies Requirements and formats, budgetary policies if any.
- Examination of minutes of the Board/Managing Committee/Governing Body/Management and Committees thereof to ascertain the impact of any decisions on the financial records.
- Study the accounting system, procedures, internal controls and internal checks existing for the NGO and verify their applicability.
- Setting of materiality levels for audit purposes.
- The nature and timing of reports or other communications.
- The involvement of experts and their reports.
- Review the previous year's Audit Report.

The audit programme should include in a sequential order all assets, liabilities, income and expenditure ensuring that no material item is omitted.

Reference:

- ICAI Study Material

Financial Analysis: Module II Unit 1

Contributing Faculty Member: Dr. Swapan Sarkar

Efficient Capital Market

After Part 1……………

- ***Efficient Capital Market Anomalies:***

Though in an efficient market, security prices must adjust instantaneously to any new information placed in the public domain thereby leaving no scope for investors to earn above normal returns,a considerable number of research studies in diverse fields have reported evidences not consistent with this proposition of efficient market theory. Such inconsistencies have been termed as "*Efficient Capital Market Anomalies*".

Some of the main anomalies that have been identified so far are as follows.

A. The January Effect:

A common empirical finding across many stock exchanges of the world is that the capital markets performs relatively well during the month of January in comparison to the remaining eleven months.Rozeff and Kinney (1976) were the first to document evidence of higher mean returns in January as compared to other months in NYSE stocksfor the period 1904-1974. Subsequently research studies conducted in European, Japanese and Singaporean stock market also provided the evidence of existence of January effect.The January effect in security return is inconsistent with the weak form of EMH because knowledge of this pattern can lead to abnormal returns by buying shares in late December and selling them in January.

B. The Weekend Effect (or Monday Effect):

French (1980) analyzed daily returns of stocks for the period 1953-1977 and finds that there is a tendency for returns to be negative on Mondays whereas they are positive on the other days of the week. Subsequently this phenomenon has been observed in U.K, Canadian, French, Australian, Japanese and Singaporean stock markets. Research results have also indicated that the Monday effect, like the January effect, is more prominent for small size firms. As the Monday effect indicates that the market prices tend to open at lower levels on Monday after the weekend, it provides an opportunity for the speculators to gain significantly by selling short on Friday close and covering the position on Monday opening.

C. Other Seasonal Effects:

Holiday and turn of the month effects have been well documented over time and across countries. Lakonishok and Smidt (1988) showed that U.S stock returns are significantly higher at the turn of the month, defined as the last and first three days of the month. Ariel (1987) showed that returns tend to be higher on the last day of the month. Similar evidences were observed in other countries as well. Brockman and Michayluk (1998) describe the pre-holiday effect as one of the oldest and most consistent of all seasonal regulation.

D. Small Firm Effect:

It has been observed in many capital markets that smaller companies (measured by total capital or total market capitalization) tend to outperform larger companies and also the market, even when returns are adjusted for risk. This suggests that investing in small firm size portfolios would be sound investment strategy. Such a result is in contravention of ECMH because it should not have been possible to discriminate between securities of various firms and earn abnormal return on the basis of a publicly observable variable had the capital market been efficient in nature. The small firm effect was first documented for U.S capital markets and ws subsequently observed in capital markets of many other countries.

E. P/E Ratio Effect:

Capital market efficiency implies that it shall not be possible to develop trading strategies based on publicly observable characteristics of firms. However, empirical evidences have suggested that securities of firms with lower P/E ratio outperform those with higher P/E ratio and also the market. Such results are in clear contravention with EMH. For example, Sanjoy Basu (1977) shows that stocks of companies with low P/E ratios earned a premium for investors during the period 1957-1971.

F. Value Line Enigma:

Value Line Investment Services dividedcommon stock of firms on the basis of performance of variables referred to as earnings momentum (change in quarterly earnings) and earnings surprise (deviation between actual and forecasted earnings). Several researchers found positive risk-adjusted abnormal returns using value line rankings to form trading strategies. Such a phenomenon clearly put question over the validity of EMH.

G. Standard and Poor’s (S&P) Index Effect:

Harris and Gurel (1986) and Shleifer (1986) found a surprising increase in share prices (up to 3 percent) on the announcement of a stock's inclusion into the S&P 500 index. Since in an efficient market only information should change prices, the positive stock price reaction appears to be contrary to the EMH because there is no new information about the firm other than its inclusion in the index.

H. Book to Market Ratio:

Fama and French (1992) found that the book to market ratio is a strong predictor of a firm's future mean returns. They observed that firms with higher book to market ratio outperform those firms with lower ratio thereby suggesting that investing in firms with higher ratios would be a profitable investment strategy.

I. Post Announcement Drift:

As per the ECMH, the price adjustment, in an efficient capital market, is instantaneous to any new information. That is, say, once earnings releases are made, it shall not be possible to develop a profitable trading strategy based on the magnitude of unexpected earnings. But empirical evidences suggest that price changes persist for some time even after the initial announcement. In other words post announcement drift is a reality. Some research studies have also indicated that the post- announcement drift is more prominent for small size firms.

J. Over/Under Reaction of Stock Prices to Earnings Announcement:

There is substantial documented evidence on both over and under-reaction to earnings announcements. DeBondt and Thaler (1985,1987) presented evidence that was consistent with stock prices over reacting to current changes in earnings. They reported positive (negative) estimated abnormal stock returns for portfolios that previously generated inferior (superior) stock price and earning performance. Bernard (1993) provided evidence that was consistent with the initial reaction being too small, and being completed over a period of at least six months. These evidences suggest that information is not impounded in prices instantaneously as the EMH would predict.

K. The Briloff Effect:

Given the conditions for capital market efficiency (i.e. information is available cost free to all market participants), there should be no reaction to releases made by intermediaries who restrict their activities to re-statement of information already available at no cost to all market participants. But the empirical evidences suggest otherwise.

Prof. Abraham Briloff, a noted critic of contemporary financial reporting standards, accounting method choices, business judgment made by management, management integrity etc. has periodically criticized the financial reporting practices of firms in his research based articles published in “BARRONS” using his superior accounting knowledge and analytical insights. He hypothesized that the market accessed information on any financial variable at face value without any consideration as to how it is computed. As a result common stock of firms criticized by Briloff typically suffer large price drop following his publication and the price drop appeared to be a permanent one.

The above anomalies of efficient market behaviourhave led researchers to question the EMH and to investigate alternative theories of market behaviour.

- **Role of Financial Analysts in an efficient market:**

The evidences found so far in relation to stock market behavior suggest that –

a) Larger capital markets are efficient in the sense that security prices generally reflect all publicly available information.
b) Financial statement information is used in investment decision making.
c) Investors are able, in most cases, to distinguish between real economic changes and changes in financial data resulting from the use of different accounting techniques.

In the light of the above evidences the role of financial analysts can be summarized as follows –

1. Evidences indicate that not all information gets reflected in the security prices at the time of publication of the financial statements. In addition, it has also been found that, investors do react to any publication of expected information. This suggests that a major objective of financial analyst should be to predict the future financial results. So an analyst’s effort should always be directed to the development of financial data prediction model. For this purpose the information obtained from the published statements will be an important tool to device a prediction model concerned with future outcome.
2. In an efficient market, security prices will also reflect the value of all analytical tools. Therefore any analytical tool is self destructive unless they are kept secret. Moreover the useful life of any particular analytical tool is short-lived. Hence a financial analyst must continually make effort to design new models and tools and to obtain access to new information sources.
3. Another important aspect that a financial analyst will need to consider in an efficient market is the cost of processing information. If the cost of processing information exceeds the

benefits derived from it, then the technique should be abandoned. Therefore the analyst must always try to reduce the cost of processing information.

4. Analysis of historical data may be useful in determining the ‘corporate Personality’ i.e. in determining whether a consistent set of behavioural pattern exists which might be used to predict management response to environmental changes. Therefore, the analyst, if required, should always use and analyze historical data to form an idea about corporate personality.
5. Many investment decisions are concerned with non-listed companies and partnership firms whose equities are not traded in the stock market. Investments are also made in foreign countries where capital markets are not efficient. In such cases the objective of the analyst would include the duty to calculate the intrinsic value of shares from historical information.

Unit 3: Prediction of Bond Risk Premium and Rating

Concept of Risk:

Risk may be defined as a situation in which each action of the decision maker leads to one of a set of possible specific outcomes each occurring with a known probability, i.e., a risky situation exists when a realized (ex-post) outcome *can* differ from an expected (ex-ante) outcome. The possibility of future investment outcomes deviating from expectation, thus constitute the risk associated with holding such investments and larger the deviation, the higher is the risk. The dispersion of future investment outcomes as measured by standard deviation is a natural measure of risk.

Types of Bond Risk:

Broadly speaking, holding of capital assets involves three types of risk.

1. ***Business risk*** which arises when actual corporate earnings deviate from expectation, thereby affecting capital asset prices and hence investor's wealth.

2. ***Market risk*** which arises when unexpected changes in general capital market conditions resulting from changes in the money supply affect investment outcomes.

3. ***Financial risk*** which is associated with holding the common stocks (equity) of firms and arises due to the presence of fixed income bearing obligations (debt capital) in the capital structure of the firm.

More specifically the risks involved in holding corporate bonds are the following four types.

1.*Default risk:* This refers to the possibility that the firm's future resources will be insufficient to meet part or all of the bond interest and principal payments. Default, or bankruptcy, risk is, in fact, a special case of the firm's business risk where the unexpected 'negative change' causes the bondholders to experience this risk as the firm fails to meet their obligation. The extent of default risk associated with bonds depends not only on the firm's business risk but also on the specific provisions of the bond issue like mortgaging bonds over assets and restrictions on the creation of additional debt or making excessive payments of dividends in time of default which enhance bondholders' security by decreasing expected losses. Note that this risk is negligible for high grade bonds and non-existent for government bonds.

2.*Interest rate risk:* This risk arises when unexpected changes in the prevailing interest rates induced by changes in the monetary policy affect bond yields and prices. In other words, this risk arises because of fixed bond interest but fluctuating market interest rate. Unexpected increase in the interest rate will cause the bond prices to decrease and this process will continue till the higher bond yields resulting from such price decreases equal the new interest rate and a new equilibrium is reached.

The possible capital losses to current bondholders resulting from such unexpected price decreases constitute the interest rate risk associated with bondholding unless the bond is held till maturity.

Interest rate risk is a function of the bond's term to maturity (i.e., its remaining duration. The longer the term to maturity, the stronger the effect of interest rate risk. Thus, prices of long-term bonds are more vulnerable to unexpected interest rate changes than those of their short-term counterparts. Note that this risk is applicable to all bonds including government and high-grade bonds.

3. *Purchasing Power Risk:* This risk refers to the loss sustained by bondholders during inflationary periods when the purchasing power of money decreases. It is worth noting the difference between nominal and real interest rate at this stage. Nominal interest rate refers to the interest stated in terms of money whereas real interest refers to interest payments in terms of their command over commodities i.e. in terms of purchasing power of money. Unexpected changes in the inflation rate causes the real interest rate to be lower than nominal interest rate and hence results in variation in bond prices and bond yields. Such unexpected changes in bond prices and bond yields constitute the purchasing power risk factor. Note that this risk is applicable to all bonds including government and high-grade bonds.

4. *Marketability risk:*It refers to the ease in disposing of the bond. The marketability risk is associated with the possible loss sustained on sale, especially when the bondholder is hard-pressed for time. The degree of marketability is a function of the individual properties of the bond (e.g., size of issue) as well as of the imperfections in the market in which it is traded (e.g. small number of traders, high transaction costs, etc.). Thus, this risk is lower for large and dispersed issues traded in well-organized markets and higher in small issues traded over the counter. Note that this risk is negligible for high grade bonds and non-existent for government bonds.

Thus, no bond is risk free. The possible risk less security is a short term (may be a week or two term to maturity) government bond for which default and marketability risks are non-existent and because of the short term to maturity interest rate and purchasing power risk is negligible.

Prediction of Bond Risk Premium

The four kinds of risks associated with bond holding are reflected in two widely used indicators – risk premium on a corporate bond and bond ratings. The capital market is dominated by risk averters i.e. investors who demand a higher yield as a compensation for an increased risk. Thus, risk premium on a bond refers to that portion of bond yield which compensates the investors for risk bearing.

L. Fisher's Model:

Sample: Fisher investigated the major determinants of bond risk premium on the basis of a sample of 366 U.S industrial corporate bonds.

Study: Fisher defined the risk premium on a bond as the difference between its market yield to maturity and the corresponding pure rate of interest.Market yield is defined as the rate of interest at which the principal and interest payments specified in the bond contract must be discounted if their present value is to equal the current market price of the bond. The corresponding pure rate of interest is defined as market yield on a risk-less bond maturing on the same day as the bond under consideration. Since no bond is riskless; the pure rate of interest refers only to investments free of default and marketability risk (i.e. government bonds). The risk premium on a bond therefore reflects the default and marketability risk factors.

Fisher hypothesized that default risk on a bond can be estimated by the following three variables:

(i) Measures of the variability o£ the firm's earnings:

The implicit assumption in using this measure is that the time series of a firm's earnings may be treated as a random sample froma normally distributed population of potential future earnings. The variation of the historical series is 'thus an estimate' of the variation in the underlying population. Therefore, other things equal, a firm with a low variation of earnings is less likely to default than a firm experiencing a high variation. Fisher measured earnings variability by the coefficient of variation ($\frac{\text{Standard Deviation}}{\text{Arithmetic Mean}}$) of the firm's net income after taxes over nine years and denoted this variable by X_1.

(ii) Measures showing how reliable the firm has been in meeting its obligations:

Other things equal, the longer a firm does not require its creditors to incur a loss, the lower is the default risk. A firm's reliability in meeting obligations, denoted by the variable X_2, was measured as the length of time since the latest of the following events occur –

(a) the firm was incorporated.

(b) the firm emerged from bankruptcy.

(c) A compromise was made in which the creditors settled for less than 100% of their claim.

(iii) Measures depending on firm's capital structure (leverage):

Capital structure indicates how much the firm's assets can decline in value before they become smaller than the liabilities, in which case the firm becomes insolvent. The equity/ debt ratio (here equity means market value of equity) denoted by the variable X_3, was chosen to measure this aspect of default risk.

Since the coefficient of earnings variation is obviously only a surrogate for default risk. Fisher considered. additional explanatory variables. One such variable was the firm's reliability in meeting obligations;

In addition to the surrogate variables for default risk, a measure for marketability risk was required. The variable chosen to reflect this risk element, X_4,was the total market value of the firm's bonds. The use of this variable was justified by the assumption that the smaller the amount of bonds outstanding, the less frequently they would betraded, and hence less perfect is their market and greater will be the marketability risk.

Fisher examined the explanatory power of the four-variable model with respect to risk premiums on a sample of U.S. industrial corporate bonds. Various least-squares regressions were run cross-sectionally on the 366 observations available, applying a logarithmic transformation to all the variables.

Findings:

1. The best regression equation obtained by Fisher was as follows:

$$X_0 = 0.987 + \underset{(0.032)}{0.307X_1} - \underset{(0.036)}{0.253X_2} - \underset{(.031)}{0.537X_3} - \underset{(.021)}{0.275X_4} \quad [R^2 = 0.75]$$

where X_0 is the logarithm of the average bond risk premium, and X_1 through $X_4$are thelogarithms of the four risk surrogates defined above. The numbers in parentheses (i.e. brackets) are the estimated standard errors of the coefficients, and R^2isthe coefficient ofmultiple determination.

2. The logarithms of the four risk surrogates accounted for 75 percent of the variance in the logarithm of risk premium, indicating a reasonably good explanatory power of the model.

3. All the coefficients had the expected signs, they were all statistically significant at the 1 percent level or lower and they were found to be relatively stable over time.

3. Therefore, the four variables— earnings variability, reliability in meeting financial obligations, capital structure, and bond marketability— are the major determinants of bond risk premium.

Bond Ratings:

Concept of Bond Rating:

Bond ratings are designed essentially to rank issues in order of their default probability after making a comprehensive analysis of the position of the issuing company in whatever industry it is in. Thus, a higher bond rating corresponds to lower default risk and vice-versa. Note that some weight is also given to the marketability risk in bond rating in a like manner. Bond ratings are thus well known, respected and extensively used indicators of bond quality.

Two world renowned rating agencies based in U.S.A are Standard and Poor and Moody's. In India bond rating is done by CRISIL (Credit Rating Information Services of India Ltd.), ICRA (Investment Information and Credit Rating Agency of India Ltd.) and CARE (Credit Analysis and Research Ltd.).

A high-grade bond has lower default risk than low grade bonds and capital losses in case of high-grade bonds in default are smaller than in case of low-grade bonds in default. But higher returns are obtained on low-grade bonds than high grade bonds due to higher riskiness of low-grade bonds.

Prediction of Bond Rating:

Bond rating is done on the basis of various quantifiable financial and operating characteristics relating to the rated bond and the issuing company and also substantial weight is given to judgmental and non-quantifiable factors.

J.O Horrigan's Model:

Horrigan was probably the first to develop a model for the prediction of bond ratings.

Sample: Horrigan's initial sample was comprised of firms whose bond ratings did-not change during 1959-64. This sample included 201 firms rated by Moody's and 151 firms rated by Standard and Poor's (137 of the firms were rated by both agencies). Results (i.e., estimated regression coefficients) obtained from the initial sample were then used to predict the ratings of two subsequent samples: *(a)* 130 firms obtaining new ratings during the period 1961-64 and *(b)* 85 firms whose previously assigned ratings were changed during 1961-64.

Study: Thus, Horrigan's study was divided into two parts as follows:

Part 1: The analysis was performed by running multiple linear regressions on the initial sample of bond ratings with various combinations of financial ratios as the independent variables.

Findings:

(a) The model with the highest explanatory power included the following five variables: (i) total assets, (ii) working capital to sales, (iii)net worth to total debt, (iv) sales to net worth, and (v) net operating profit to sales.

(b) Of the five variables, size of firm (total assets) was found to be the most important variable in terms of explanatory power, and net worth to total debt (a capital structure measure) was the most important ratio.

(c) These regression results confirmed the well-known and documented phenomenon that default risk (reflected in the bond rating) is highly correlated with firm size and degree of leverage, the latter variable indicating the firm's financial risk.

(d) The coefficient of multiple determination, R^2, was slightly below 0.50, indicating that about 50 percent of the cross-sectional variation in bond ratings was "explained" by the five variables listed above.

Part 2: The regression coefficients derived from the initial sample were then used to develop indexes for predicting *new* sets of ratings as well as *changes* in the ratings. The predictions were made on the basis of the firm's financial data for one and two years prior to the new rating or the change in rating and were then compared with the actual rating.

Findings:

(a) Approximately 58 and 52 percent of Moody's and Standard and Poor's new ratings, respectively, were correctly predicted, and most of the remaining predictions were within one rating of the actual one's.

(b) With respect to rating changes, approximately 54 percent of Moody's and 57 percent of Standard and Poor's were correctly predicted.

Conclusion:

Based on these results, Horrigan concluded that ". . . financial ratios and accounting data can be useful in long-term credit administration." The main use of the model for analysts, financial officers, and underwriters obviously lies in its ability to predict the value of a new rating.

Limitations:

1. Horrigan's regression equation failed to predict the timing of changes in ratings.
2. The explanatory variables in the regression equation were restricted to conventional financial ratios. But the real usefulness of accounting data can be appreciated and measured when its performance is compared with that of accounting variables. The restrictiveness of this approach was confirmed by Horrigan when a non-accounting dummy variable, representing the subordination status of the bonds, was added to the model.The addition of the subordination dummy variable improved the explanatory power of the model from 0.50 to 0.60.

Instruction for Final Examination:

1. For unit 1 and 2 last four years' question papers should be considered as model question papers.
2. For unit 3 follow the notes given herewith. The notes are self-explanatory.

Financial Analysis: Module 2 Unit 2

Contributing Faculty Member: Prof. Swagata Sen

DISTRESS ANALYSIS

Continuing from previous upload………………………….

Univariate Model: Beaver's (1966) Study:

I. Sample:

Beaver's sample consisted of 79 failed firms and 79 non-failed firms selected by paired sample design. Beaver used a broader definition of corporate failure. Of these 79 cases in Beaver's sample selected between the period 1954 to 1964, 59 were bankrupt, 16 firms failed to pay preferred stock dividend, 3 were bond default and 1 had an overdrawn bank account. For each failed firm, a non-failed firm from the same industry and with similar asset size was selected. This selection is known as paired sample design.

II. Substance:

Beaver's study can be divided into two parts- the first part examined if there are any observable differences in the mean financial ratios between failed and non-failed group of firms. The second part examined the predictive ability of ratios using the dichotomous classification test.

A. Part One: Financial statement data for the failed firms were available for five years before failure. Thus, data for each of the non-failed firms corresponded to the same time period as that of the failed firms. 30 conventional financial ratios were computed for each of the five years before failure. The equally weighted means of each 30 ratios were determined for the failed and non-failed group and were compared to see if there were marked differences in the mean ratios between the two groups. Beaver called this comparison of mean ratios a profile analysis. Of the 30 ratios, the 5 ratios that were considered as reflecting the most distinct differences between the two groups together with no credit interval and total asset value are shown in graphs in profile analysis.

Findings (Part One):

1. There is a marked difference in the behaviour of mean financial ratios of a failed and non-failed group of firms.
2. The differences in mean values are in the predicted direction for each of the ratio in all the five years before failure. As for example failed firms have exhibited a higher total debt to total asset ratio, but a lower cash flow to total debt, net income to total asset, working capital to total asset ratios that the non-failed firms.
3. Of the five ratios in profile analysis, cash flow to total debt and net income to total asset ratios exhibited marked differences as early as five years before failure.
4. The deterioration in the mean values of each ratio for the failed firms is very pronounced over the five year period.

Part Two: To examine the predictive ability of the ratios, Beaver used dichotomous classification test to first classify the sample firms randomly into two subsamples. The optimal cut-off point for each ratio was selected from the first subsample (i.e. estimation sample) by arranging the values of each ratio and choosing the value that minimize the total misclassification percentage (i.e. Type I plus Type II errors). This optimal cut off point for each ratio was used to classify failed and non-failed firms in the second subsample (i.e. validation sample). Comparison of the actual status of the firm with the predicted one yields a percentage error for the validation sample. The ratio with the smallest percentage error was considered to be the best predictor of failure.

Findings (Part Two):

1. Of the five ratios – cash flow to total debt, net income to total asset, working capital to total asset, total debt to total asset and the current ratio which were considered as the most powerful predictors of failure, cash flow to total debt and net income to total asset ratios classified failed and non-failed firms with similar success in each of the three years prior to failure (It had been found that both the ratios misclassified 13% of the firms one year prior to failure).
2. But on comparing the misclassification percentage by the two ratios for fourth and fifth year before failure, it had been observed that cash flow to total debt ratio is the most successful predictor as it misclassified 24% and 22% of the firms in the fourth and fifth year before failure respectively. Net income to total asset ratio predicted second best with misclassification percentage of 29% and 285 in the same period.
3. The popular measure of solvency i.e. current ratio was among the worst predictors of failure with a relatively higher misclassification percentage of 20% and 45% in the first and fifth year before failure respectively. Thus the mixed ratios i.e. those which have income or cash flow in the numerator and assets or liabilities in the denominator, outperformed the traditional solvency ratios.
4. Another interesting result of Beaver's study was that the optimal cut-off point that minimized total misclassification percentage in the estimation sample resulted in different percentage of Type I ans Type II errors in the validation sample.

Limitations of Beaver's Study:

1. The dichotomous classification test employed in the Beaver's Study failed to take into account any cost differential between Type I and Type II errors. In reality these two costs are likely to be different to the decision maker. The identification of a failed firm as non-failed (Type I) will cause the decision maker to lose his entire value of investment in the firm. Again the identification of a non-failed firm as failed will result in opportunity cost in the form of profits that could have been made by the decision maker had he dealt with the firm. This cost differential must therefore be taken into account while choosing the optimal cut-off point.
2. If there are more non-failed firms than failed firms in the validation sample, then the univariate model may give a misleading picture of the relative frequency of Type I and Type II errors. Thus to get accurate result, proportion between failed and non-failed firms in the validation sample must be realistic.
3. The technical insolvency cases of the firms heading for failure may actually survive by severe rationalization, govt. intervention or take over by a more successful company.

Problem arises in identifying such a firm as failed or surviving one. The researcher's discretion may apply in such a case which may affect the reliability of the results. Again a firm, predicted as failed may be able to hang on beyond the completion date of the research study and hence result in Type II error.

4. The selection of ratios were backed by their popularity in literature and not guided by postulated theory. It may so happen that a ratio may be widely used but may not be appropriate predictor in the context of relevant problem.
5. The financial ratios are individually examined in univariate prediction model. It may so happen that different ratios may predict different status (failed or non-failed) for the same firm. Again, failure may arise due to a number of reasons which cannot be measured by separate ratios. This problem has been directly addressed by Multivariate Prediction Model which incorporates the values of several financial ratios in one single model.

Multivariate Corporate Failure Prediction Model:

Multivariate model takes into account several indicators of failure in the prediction process. The dependent variable in such model is either a prediction as to group membership (i.e. failed or non-failed) which is done using the statistical technique of Multivariate Discriminant Analysis (MDA) or a probability estimate of group membership (i.e. probability of failing) which is done using Logit or Probit Analysis. Most of the early studies on multivariate models including the noted Altman (1968) Study used the technique of MDA.

Altman (1968) Study:

Sample:
Altman's sample consisted of 33 failed and 33 non-failed manufacturing firms selected by 'paired sample design' where industry and size were used as the pairing criteria. Unlike Beaver, Altman's sample of failed firms consisted of those firms that were legally bankrupt and have filed bankruptcy proceedings under Chapter 10 of the National Bankruptcy Act between the periods 1946 to 1965 in the USA.

Study:

1. Altman extensively used MDA technique in his analysis. In MDA, a linear function of the following form is estimated which produces an individual Z score.

   $Z = a_1x_1 + a_2x_2 + a_3x_3 + \ldots\ldots\ldots\ldots\ldots\ldots.. + a_nx_n$

   Where $a_1, a_2, \ldots\ldots\ldots\ldots a_n$ = discriminate coefficients and $x_1, x_2, \ldots\ldots\ldots\ldots x_n$= independent variables (usually financial ratios)

   The Z score is a composite ratio with the most effective weights to the individual independent variables such that the dispersion of Z is minimized for each group (i.e. failed and non-failed) and the distance between mean Z for each group is maximized thereby reducing chances of any overlap. Thus the discriminant coefficients in the function should be such as to maximize the ability to discriminate between two groups.

   In estimating the discriminant function, Altman collected Balance Sheet and Income Statement data to compute 22 ratios (of probability, liquidity, solvency, leverage and activity ratios type) for each of the firms in his sample. Of the 22 tested ratios, the five ratios that did the best overall job together in discriminating the bankruptcy status of the sample firms were finally included in his discriminant function as follows:

$Z = 0.012x_1+0.014x_2+0.033x_3+0.006x_4+0.999x_5$; Where

$x_1 = \frac{Working\ Capital}{Total\ Asset}$ (a liquidity measure)

$x_2 = \frac{Retained\ Earnings}{Total\ Asset}$ (a measure of re-invested earnings)

$x_3 = \frac{EBIT}{Total\ Asset}$ (a profitability measure)

$x_4 = \frac{Market\ Value\ of\ Equity}{Book\ Value\ of\ Total\ debt}$ (a measure for the firm's financial structure or leverage)

$x_5 = \frac{Sales}{Total\ Asset}$ (a measure for sales generating ability of the firm's assets)

2. After estimating the discriminate function, dichotomous classification test was used to examine its predictive strength. First a series of Z score were computed for each firm in the estimation sample and alternative Z score cut-off (i.e. mid-point between two successive Z scores) together with the misclassification percentages were determined for the estimation sample. The Z score cut-off that minimized the total misclassification percentage was selected as the optimal Z score cut-off and was applied on validation sample to examine its predictive power.

Findings:

1. After applying the dichotomous classification test, Altman identified an optimal Z score cut-off range as follows – 1.81 to 2.99.
   A firm's solvency status can be evaluated using Altman's model by first calculating the Z score on the basis of his model and then relating the Z score to the optimal cut-off range as follows:
   a) Assign the firm as bankrupt if its Z score is less than 1.81.
   b) Assign the firm as non-bankrupt if its Z score is greater than 2.99.
   c) If the firm's Z score lies within the range 1.81 to 2.99, referred to as 'Gray Area' or 'Zone of Ignorance', the firm cannot be identified as bankrupt or non-bankrupt and requires further analysis to determine its solvency status.
2. On examining the predictive ability of its discriminant function in each of the five years before failure, Altman observes that he could predict bankruptcy with 95% success in the first year before failure, 72% in second year, 48% in third year, 26% in fourth year and 39% in the fifth year before failure. This statistic shows that Altman's model can be successfully used to predict bankruptcy only up to 2 years prior to failure.

Limitations of Altman's Study:

1. Given the small size of Altman's sample, it is doubtful whether his model's estimates would suit the specific application. Accordingly, while applying this model, care should be taken to adjust the model's estimates to the specific population and time period examined.
2. Altman's model could not accurately discriminate between failed and non-failed firms when the prediction horizon was greater than two years before bankruptcy. In contrast, Beaver's univariate study could show some predictive ability up to five years before bankruptcy. Although the ability declined as the lead time was increased.

3. Most of the variables examined in Altman's model were firm oriented variables like profitability and coverage ratios. The macro economic variables like changes in interest rate and unemployment rates etc. which have a strong correlation with failure rates in the economy were ignored in Altman's model.
4. The prior probabilities of failure and survival were assumed to be equal for failed and surviving firms and different cost of Type I and Type II errors were not considered in Altman's model.

Altman's Study: Revised Versions

The original model on Z score, as developed by Altman, was based on public limited (listed) manufacturing firms only. As a result, critics had doubt over its applicability in other company groups. Altman, therefore, revised his original model for (i) private limited companies and (ii) non-manufacturing companies later on.

Z score Model for Private Limited Companies

In 2002, Altman advocated a revised Z score formula for private companies. The revised equation was –

$Z = 0.0717x_1+0.008x_2+0.03107x_3+0.0042x_4+0.998x_5$

Where X_1 to X_5 have their usual meaning except, $x_4 = \frac{Book\ Value\ of\ Equity}{Book\ Value\ of\ Total\ debt}$

[**Why should we take book value of equity?** This is because market value of equity is not available for private companies.]

The revised identification criteria is given below-

a) Assign the firm as bankrupt if its Z score is less than 1.23.
b) Assign the firm as non-bankrupt if its Z score is greater than 2.9.
c) If the firm's Z score lies within the range 1.23 to 2.9, the firm falls in the gray area.

Z score Model for Non-manufacturing Companies

Altman further revised his model to make it suitable for non-manufacturing companies. Under this revised version, he dropped the last variable i.e. $x_5 = \frac{Sales}{Total\ Asset}$.

[**Why to drop x_5?** This is because for non-manufacturing firms (say service sector firm) total assets are very low and thus the ratio is abnormally high. This is why inclusion of the same could have given absurd result.]

The revised equation was –

$Z = 0.0656x_1+0.0326x_2+0.0672x_3+0.0105x_4$;Where X_1 to X_4 have their usual meaning. The revised identification criteria is given below-

d) Assign the firm as bankrupt if its Z score is less than 1.1.
e) Assign the firm as non-bankrupt if its Z score is greater than 2.6.
f) If the firm's Z score lies within the range 1.1 to 2.6, the firm falls in the gray area.

Application of Altman's Z Score Model; Numerical Example:

Q. The Statement of Assets and Liabilities of XYZ Ltd as on 31.03.2016 is given below:

Liabilities	Amount(Rs.)	Assets	Amount(Rs.)
Equity Share Capital (Rs.10)	800000	Fixed Assets	2000000
Reserve and Surplus	500000	Investments	400000
10% Debentures	800000	Inventories	500000
12% Term Loan	800000	Sundry Debtors	700000
Sundry Creditors	600000	Cash and Bank	200000
Provision for Tax	300000		
	3800000		3800000

Additional Information:

i. Net Sales for the year 2015-16 was Rs.1,04,00,000.
ii. Dividend per share was Rs.2.50
iii. Dividend Payout ratio was 60%.
iv. Price-Earnings ratio is 11.
v. Corporate tax rate is 30%

Using Altman's model, calculate Z score of XYZ Ltd. and interpret the results.

Solution:

The Altman's Z score equation for prediction of bankruptcy is -

$Z = 0.012x_1+0.014x_2+0.033x_3+0.006x_4+0.999x_5$; Where

$x_1 = \frac{Working\ Capital}{Total\ Asset}$ (a liquidity measure)

$x_2 = \frac{Retained\ Earnings}{Total\ Asset}$ (a measure of re-invested earnings)

$x_3 = \frac{EBIT}{Total\ Asset}$ (a profitability measure)

$x_4 = \frac{Market\ Value\ of\ Equity}{Book\ Value\ of\ Total\ debt}$ (a measure for the firm's financial structure or leverage)

$x_5 = \frac{Sales}{Total\ Asset}$ (a measure for sales generating ability of the firm's assets)

1. Here, working capital = C.A – C.L

= (500000+700000+200000) – (600000+300000) = 500000

Total Assets = 3800000

So, x_1 = (500000/3800000) × 100 = 131.58%

2. Here, Retained earnings = Reserve and surplus = 500000

So, x_2 = (500000/3800000) × 100 = 131.58%

3. Here, DPS = EPS × Dividend payout ratio

Or, EPS = DPS/Dividend payout ratio = 2.50/60% = 4.17

So, Earnings available for equity shareholders = EPS × No. of shares = 4.17×80000 = 333333

Calculation of EBIT

Particulars		Amount (Rs.)
Earnings available for equity shareholders i.e. PAT		333333
Add. Tax ($\frac{30}{100-30}$×333333)		142857
EBT		476190
Add. Interest on debenture (800000*10%)	80000	
Interest on debenture (800000*12%)	96000	176000
EBIT		652190

X_3 = (652190/3800000)×100 = 171.63%

4. Market price per share = EPS × P/E Ratio = 4.17*11 = 45.87

Market value of equity = 45.87 × 80000 = 3669600

Book value of equity = E.S.C + Reserve and Surplus = 800000+500000 = 1300000

x_4 = (3669600/1300000) ×100 = 282.27%

5. Net sales = 1,04,00,000

x_5= 1,04,00,000/3800000 = 2.74 (***not to be converted into percentage***)

So, Z = 0.012 × 131.58+0.014 × 131.58 +0.033 × 171.63 + 0.006 × 282.27 +0.999 × 2.74

= 1.57 + 1.84 + 5.66 + 1.69 + 2.73 = 13.49

Since the value of Z is higher than 2.99, the firm is not a bankrupt firm.

Unit 1: Forex Transactions

Determination of Cross Exchange Rates

At the retail forex market, home currency can be easily exchanged directly against some major currencies of the world but in some cases an user might require to know the exchange rate prevailing for other not so popular currencies which are not quoted directly against the home currency and is quoted against the most frequently traded currencies.

To illustrate, an Indian can easily find out from the currency dealers' the exchange rate prevailing for USD, GBP, EUR, JPY, AED, SGD, THB, AUDand accordingly an individual can exchange the home currency to obtain any of the quoted currencies but to know the exchange rate for ARS (Argentine peso) or PHP (Philippines Peso) or ZAR (South African Rand) against INR (Indian rupee) from a local currency dealer is not possible. The reason is at the retail level, dealers deal with only such currencies which are frequently exchanged.

So, to obtain the relevant exchange rate prevailing between INR and ZAR we can work out indirectly the value of the exchange rate based on the following 3 steps:

Step 1: Find the spot exchange rate between INR and USD (if exchange rate quote is given directly)

Step 2: Find the spot exchange rate between ZAR and USD (if exchange rate quote is given directly)

Step 3: Work out the exchange rate between ZAR and INR (known as cross-rate) based on the above 2 given spot- exchange rates.

One must clearly understand that out of the above 2 exchange rates involving 3 currencies, one of the currencies is a common currency for the given 2 exchange rate i.e. in this case it is USD.

Let us again clarify the steps to determine the cross-rate between INR and ZAR with a different common currency now, say, EUR.

Step 1: Find the spot exchange rate between INR and EUR (if exchange rate quote is given directly)

Step 2: Find the spot exchange rate between ZAR and EUR (if exchange rate quote is given directly)

Step 3: Work out the exchange rate between ZAR and INR (known as cross-rate) based on the above 2 given spot- exchange rates.

Both the approaches using USD or EUR (as the common currency) which are the most frequently traded currencies will lead to the same answer of the value of the exchange rate (cross-rate) between ZAR and INR.

The following numerical illustration will clarify the above discussion:

1.1 Determine the cross-rate between INR and ZAR based on the following information:

INR/USD: 75.37 (one -way spot exchange rate between INR and USD as on 31.03.2020)
ZAR/USD: 17.73 (one-way spot exchange rate between ZAR and USD as on 31.03.2020)

Solution: (Here the common currency is USD)
Step 1: 1 USD = 75.37 INR
Step 2: 1 USD = 17.73 ZAR → 17.73 ZAR = 75.37 INR
Step 3: Cross rate between INR and ZAR:
1 ZAR = (75.37/17.73) INR = 4.25 INR (Answer in Direct Quote)
Or, 1 INR = (17.73/75.37) ZAR = 0.2352 ZAR (Answer in Indirect Quote)
Both the answers are correct, it depends on whether the cross-rate will be directly quoted or indirectly quoted.

1.2 Determine the cross-rate between INR and ZAR based on the following information:
INR/EUR: 82.95 (one -way spot exchange rate between INR and EUR as on 31.03.2020)
ZAR/EUR: 19.51 (one-way spot exchange rate between ZAR and EUR as on 31.03.2020)

Solution: (Here the common currency is EUR)
Step 1: 1 EUR = 82.95 INR
Step 2: 1 EUR = 19.51 ZAR → 19.51 ZAR = 82.95 INR
Step 3: Cross rate between INR and ZAR:
1 ZAR = (82.95/19.51) INR = 4.25 INR (Answer in Direct Quote)
Or, 1 INR = (19.51/82.95) ZAR = 0.2352 ZAR (Answer in Indirect Quote)

As we can see from both the Illustration 1.1 and 1.2 that the value of the cross -exchange rate between INR and ZAR is same at a given point of time whether we use USD or EUR as the common currency.
Now, let us again learn the steps to determine cross-rate using 2-way exchange rate quotes i.e. when both bid and ask rate are given.

1.3 Determine the cross-rate between INR and ZAR based on the following information:
INR/USD: 74.85 – 75.37 (two -way spot exchange rate between INR and USD)
ZAR/USD: 17.25 – 17.73 (two-way spot exchange rate between ZAR and USD)

Solution: (Here the common currency is USD)
Step 1: 1 USD = 74.85 – 75.37 INR
Step 2: 1 USD = 17.25 – 17.73 ZAR
↑ Bid ↑ Ask

Step 3: Cross rate between INR and ZAR will be determined in 2 parts as because we need to compute the bid rate first and then the ask rate

$(INR/ZAR)_{Bid} = (INR/USD)_{bid} \times (USD/ZAR)_{bid}$

given not given directly

$= (INR/USD)_{bid} \times \{1 / (ZAR/USD)_{ask}\}$ *

$= (74.85) \times \{ 1 / (17.73) \}$

$= 4.22$ (bid rate)

$(INR/ZAR)_{Ask} = (INR/USD)_{ask} \times (USD/ZAR)_{ask}$

given not given directly

$= (INR/USD)_{ask} \times \{1 / (ZAR/USD)_{bid}\}$ *

$= (75.37) \times \{ 1 / (17.25) \}$

$= 4.37$ (ask rate)

The cross-rate between INR and ZAR (for 2 way quote) is INR/ZAR: 4.22 – 4.37 i.e. 1 ZAR= 4.22 – 4.37 INR.

NB. * whenever taking the reciprocal of the exchange rate, bid rate will become ask rate and ask rate will be taken as bid rate.

Similarly, you can work out the cross rate in terms of 1 INR in the form of ZAR/INR.

Practice Numerical:

1. A foreign currency dealer quotes the following exchange rates:
   (i) INR/AED: 17.823/45
   (ii) INR/THB: 1.16/35
   (iii) INR/CAD: 34.42/78
   You as a customer is interested to purchase 10,000 units of THB and then would like to convert THB so obtained into AED. Determine the amount of AED.

2. Determine the exchange rate between GBP and CAD using the following given rates:
   (i) USD/GBP: 1.63 – 1.74
   (ii) CAD/USD: 1.123 – 1.245

3. Find the cross-rates between Pound Sterling and Arab Emirate Dinar based on the following exchange rate quotations:
   (i) CAD/GBP: 1.823/36
   (ii) AED/CAD: 0.8334/48

Unit 2: Currency Arbitrage

Currency Arbitrage is the process or mechanism through which one can earn a riskless profit without any capital commitment or capital investment by exploiting any opportunity that exists in the forex market due to any price discrepancies prevailing in the exchange rate in different markets of the world at any given point of time. An arbitrageur is a person who undertake the process of currency arbitrage. Such opportunities exist for very limited time, might be for few seconds on real time basis, before being wiped out by the arbitrageurs resulting in an equilibrium of the forex market.

In this unit we will be focusing on the Spot Market currency arbitrage involving two and three different currencies. 2-point arbitrage involves only two currencies and is known as Spatial arbitrage whereas 3-point arbitrage involves three currencies and is also known as Triangular arbitrage or Geographical arbitrage.

Now, let us clarify the arbitrage concept in a very lucid manner. Basically, it is a human tendency to buy goods at a cheaper price and sell at a dearer price. The same principle applies in case of currency arbitrage. So, the necessary condition here is that any product must be available in both the markets and one can easily buy from one market and sell in the other market without any restrictions, assuming that prices are different in both the markets. Quite naturally, such price discrepancies will not sustain forever, and after some time, both the markets will command same price. For currency exchange rates in the forex market, an arbitrageur looks for any such opportunity to exploit favourably in order to earn risk-less profit. (underlying assumptions exist)

We will illustrate stepwise how an arbitrageur can take advantage of the exchange rate - price discrepancies to make money in the forex market with the help of the following example.

2.1 The following quotes are available in two different forex markets (dealer's quote):

(i) 1 EUR: 4.432/49 AED

(ii) 1 AED: 0.232/59 EUR.

Both the exchange rates given involves 2- currencies Euro and Dirham, the first one is quoted in terms of one-unit denomination of Euro and the other one is quoted in terms of one unit of Dirham. To proceed further, it is necessary to convert either of the exchange rate in similar terms.

Step 1: Let us convert the second exchange rate in terms of 1 EUR.

Given 1 AED = 0.232 – 0.259 EUR

∴ 1 EUR = (1/0.259) – (1/0.232) AED

1 EUR = 3.861 – 4.31 AED

Step 2: Now both the exchange rates are easily comparable to find out in which market the exchange rate is cheaper and where one can sell at a higher price, if price discrepancies exist at all.

Given rate: 1 EUR= 4.432 –4.449 AED

Derived rate: 1 EUR= 3.361 – 4.31 AED

Bid Ask

Step 3: An arbitrageur will look for price discrepancies, which in this case we can clearly see that discrepancies does exist. One can buy 1 EUR from the dealer @ 4.31 AED and can sell the same EUR to another market (dealer) @ 4.432 AED. (assumptions exist)

Step 4: An arbitrageur can buy any amount of EUR (say 100 or 1000 or 100,000) and can sell them immediately, on real-time basis to pocket the difference as a riskless profit, without any capital investment. This need to be done swiftly as such opportunities exist for only few seconds in the actual market.

Step 5: Arbitrage Gain per 1 EUR = 4.432 – 4.31 AED = 0.122 AED (Ans)

The above illustration involves only 2 currencies and is known as 2-point or Spatial arbitrage. We will now take up 3-currencies to illustrate how triangular arbitrage works.

2.2 From the following exchange rates prevailing at a given point of time, determine whether currency arbitrage is possible.

(i) 1 TRY= 22.18 – 22.2 BDT
(ii) 1 TRY= 29.69 – 29.72 PKR
(iii) 1 PKR= 0.75 – 0.78 BDT

Let us first identify the three currencies involved in the above exchange rate quotes, viz. TRY is the symbol for Turkish Lira, BDT is Bangladesh Taka and PKR is Pakistani Rupees. While solving triangular arbitrage, one must always remember that whichever currency one start with must be ending with the same currency. Say if in the above example if we start with TRY, then final answer at the end after all the conversion will be in terms of TRY.

Step 1: Assuming home currency to be BDT, one will be in possession of BDT which will be used to BUY TRY. (i.e. Sell BDT to BUY TRY)

So, relevant exchange rate is 1 TRY = 22.2 BDT, accordingly we can assume an arbitrageur can initially use 222 BDT to obtain 10 TRY or 2220 BDT to buy 100 TRY or any other amount. (the amount of initial investment whether 222 BDT or 2220 BDT is arbitrageurs' own decision)

Step 2: Now SELL TRY to BUY PKR.

Relevant exchange rate for the purpose of conversion: 1 TRY = 29.69 PKR; if we proceed with the initial investment of 222 BDT then we must be having 10 TRY.

So, PKR obtained = 10 TRY @ 29.69 = 296.9 PKR

Step 3: Now SELL PKR to BUY BDT (initial currency)

Relevant exchange rate for the conversion: 1 PKR = 0.75 BDT

Now, BDT obtained = 296.9 x 0.75 = 222.675 BDT.

Step 4: Arbitrage Gain= (222.675 -222.0) BDT = 0.675 BDT

Practice Numerical:

1. Determine whether arbitrage gain is possible in the following case:
   (i) 1 BRL= 0.1235/48 BHD
   (ii) 1 BHD= 8.0435/682 BRL
   (iii) 1 BRL= 0.1242/67 BHD

2. Based on the following exchange rate quotations, identify whether triangular arbitrage gain will work out in favour of the arbitrageur.
   (i) 1 EUR= 82.4261/88 INR
   (ii) 1 AUD= 33.567/93 INR
   (iii) 1 AUD= 0.4239/775 EUR

3. From the given exchange rate prevailing in the spot market determine whether an arbitrageur can earn riskless profit from it.
   (i) 1 TRY= 161.75 – 161.96 CLP
   (ii) 1 CLP= 0.0943 – 0.0955 RUB
   (iii) 1 RUB= 0.0682 – 0.06295 TRY

Unit 2: Forward Markets

Based on prevailing Spot rates and on the basis of swap points we can compute the Forward market rates. Let us take an illustration to compute forward market rates.

2.4 Given Spot rates: 1$ = 76.235 – 76.678 INR

1- Month swap points are 9/12 and 2- month swap points are 15/22.

We will now determine the 1-month forward rate as well as the 2-month forward rate.

Solution:

Spot Rate:	76.235	-	76.678
+ Swap points:	9		12
1 -month forward =	76.244	-	76.690 (Answer)

Similarly, for the determination of 2-month forward rate, we will be using the 2-month swap points, and as the swap points are increasing, we will add such swap points with the current spot rate.

Spot Rate:	76.235	-	76.678
+ Swap points:	15		22
2 -month forward =	76.250	-	76.700 (Answer)

Now, let us compute the Forward premium/ discount annualized percentage:

Using the 1-month forward rate:

Forward Premium/ discount = (Forward rate minus Spot rate)/Spot rate * 12/n * 100

Where ‘n’ denotes the number of months

Therefore, Forward Premium/ discount = (76.69 – 76.678)/ 76.678 * 12/1 * 100

= 0.187%

Notice that the above value computed is positive (+), which indicates that the currency is at a discount. In other words, Indian Rupee is at a discount whereas the USA Dollar is at a premium. Had this value of 0.187 be in negative (-), then it would have been interpreted in a reverse way i.e. Indian Rupee would have been at a premium, whereas the USA Dollar at a discount.

You are now required to compute the Forward premium or discount of the above exchange rate quotations using the 2-month forward rate.

You might have also noticed that while determining Forward premium or discount, we have used the asking rates of the exchange rate quotations. The reason being, asking rates are our buying rates of currency as a customer.

Arbitrage in the Forward Market:

If given a choice between 2 investment opportunity carrying 3.5 percent rate of interest p.a. and 5 percent rate of interest p.a., all sane person will choose the 2nd option. But what if, the 2nd option carries a processing charge of 2 percent p.a. on the amount of investment made, then the rationale choice will reverse. In other words, the interest rate differential advantage in favour of the 2nd option of 1.5 percent is wiped outby the 2 percent processing charges applicable for the 2nd option. In that case the first option of earning a 3.5 percent interest will be a preferable option for the investor. The above discussion is done to make students understand that higher rate of interest which seems to be attractive may not be beneficial under all circumstances.

In case of forward market arbitrage, involving interest rates of 2 countries and exchange rate at 2 point of time – current exchange rate (Spot rates) and some specific exchange rate at a different point of time (forward rates), we have to proceed in a manner that will lead to arbitrage gain, which is explained through an illustration in the following.

2.5 Given Interest rates:

Country	Deposit Rate	Borrowing Rate
U.K.	2.5%	3.0%
India	4.0%	4.5%

Spot exchange rate: 1 GBP = 78.5 – 79 INR

3-month exchange rate: 1 GBP = 80.4 – 80.8 INR

Solution:

We have two option in front of us- either we can borrow funds from UK @3% and invest in India @4% for a period of 3 months OR we can borrow from India @4.5% and invest in UK @2.5%. The option which will be favourable can be checked through determining Interest rate differential (IRD) and then comparing it with the Forward premium/ discount to evaluate whether the currency in which investment is made is appreciating or depreciation during these intervening period of 3 months.

In this case IRD < Forward Discount, therefore investing in a country carrying higher rate of interest will not be beneficial.

Accordingly, we will earn arbitrage gain, if we borrow from India for 3 months and then invest the amount in UK for a similar period.

Step 1: Borrow Rs. 79,000 @ 4.5% p.a. for 3 months from India. (Plz. note amount borrowed depends on students' own choice or assumption)

Step 2: Convert Rs. 79,000 @ Rs. 79 = 1 GBP using spot rate to obtain 1000 GBP.

Step 3: Now, Invest 1000 GBP in UK @ 2.5% p.a. for 3 months.

Step 4: After 3months, Amount Receivable = [(1000 * 2.5% * 3/12) + 1000] = 1006.25 GBP

Step 5: Reconvert 1006.25 GBP to INR @80.4 (3-month relevant forward rate) and obtained Rs. 80,902.50

Step 6: Repay the Rupee Loan= [79,000 + (79,000 * 4.5% * 3/12)] = Rs. 79,888.75

Step 7: Arbitrage Gain = Rs.80,902.5 – Rs.79,888.75 = Rs.1013.75 (Answer)

Practice Numericals:

1. From the given information, compute whether arbitrage gain is possible.
   Interest rates: USA= 2.25 – 2.50 p.a.; China= 2.8 – 2.9 p.a.
   Spot rate: 1 USD = 6.29 – 6.30 CNY; 3-month Forward rate: 1 USD= 6.25 – 6.255 CNY

Parity Theorems:

Law of One Price: According to Law of one price if a commodity or product can be sold in two different markets, its price should be the same in both the markets.
Assumptions:

(i) There are no transportation costs
(ii) There are no transaction costs (brokerage, commission)
(iii) There are no tariffs
(iv) There is no restriction on the movement of goods (free market)
(v) There is free flow of information
(vi) There is no product differentiation.

Real Exchange rate: Any change in the exchange rate over a period of time may be a nominal change or a real change. What is important for us to understand while determining the relative competitiveness of the nations is the real exchange rate. The real exchange rate is determined as shown below:

Real exchange rate (e_R) = spot exchange rate * (1 + inflation rate of the home currency)/(1 + inflation rate of the foreign currency)

Big Mac Index: The economists' introduced the Big Mac Index- a guide to understand the fair value of nations' currencies in 1986 and since then it has been publishing the index every year. The index measures undervaluation or overvaluation of currencies. It also indicates which currencies are correctly valued. The index is based on the absolute version of the theory of PPP, which states that the exchange rate between 2 currencies should adjust to equalize the price of a standard basket of goods and services between the 2 countries. In the basket the economist have taken MacDonalds' Big Mac Hamburger. The Big Mac Hamburgers would cost the same in all countries wherever they are available. The Big Mac was chosen because it is available in a common specification in all the countries worldwide. Therefore it is possible to compare the currencies of several countries using the Big Mac Index.

PPP Theorem: Purchasing Power Parity Theorem is based on the Law of One Price which applies to any product irrespective of its geographical location and the currency in which it is bought or sold. A single price of the product must prevail no matter where it is sold or in which currency the price is denominated.

The relationship of exchange rates with inflation rates, first propounded by Swedish economist Gustav Cassel is referred to as PPP. The focus of PPP is on the process of arbitrage that must make prices equal among nations. The foundation of PPP lies in the process of arbitrage that would remove deviations, if any, in the foreign exchange rates if they were not in conformity with PPP. Arbitrageur will act if there is a disparity between the PPP. Actual exchange rate in India say Rs. 75/ $ whereas the prescribed exchange rate as per PPP should be Rs. 79.5/$. In this case, if the actual exchange rate is less than the prescribed exchange rate, then the Indian currency is overvalued and the US currency is undervalued.

One may state that on an overall basis, general price levels in the two economies would determine the exchange rates. In most cases it has been found that the actual exchange rate differs from those determined by PPP.

The PPP described above is called the absolute version which states that the spot exchange rate must represent the ratio of the price levels of common basket of goods. The relative version of PPP concentrates on the magnitude and direction of changes in the exchange rates over a period of time. It establishes the relationship between the inflation rates and changes in the spot exchange rates.

The relative PPP can be expressed as:

$e_t = e_0 * [(1+ i_h)/(1 + i_f)]$ or $e_2 = e_1 * [(1+ i_h)/(1 + i_f)]$ where i_h stands for inflation rate of home currency and i_f stands for inflation rate of foreign currency.

i.e. $(e_2 / e_1) = [(1+ i_h)/(1 + i_f)]$

or, $(e_2 / e_1) -1 = [(1+ i_h)/(1 + i_f)] - 1$

or, $(e_2 / e_1) -1 = (i_h - i_f)/(1 + i_f)$

If the inflation in the foreign county is insignificant, that is, relatively very small inflation then the above expression can be rewritten as

$(e_2 / e_1) -1 = (i_h - i_f)$ or $\Delta e / e_1 = (i_h - i_f)$

This is referred to as relative purchasing power parity which states that changes in nominal exchange rates would be approximately equal to differences in the inflation rates of the two countries.