AUDITING-II

CHAPTER ONE

1. AUDIT SAMPLING

1.1. Rationale for and methods of Audit sampling

- **Audit sampling** is the application of an audit procedure to less than **100** percent of the items within an account balance or class of transactions for the purpose of evaluating some characteristic of the items selected in order to form or assist in forming a conclusion concerning the population.

❖ In an audit, sampling procedures are used because it is not practical to examine every single item in a population.

❖ A ***representative sample*** is one in which the characteristics in the sample of audit interest are approximately the **same** as those of the population.

❖ In practice, auditors never know whether a sample is representative, even after all testing is complete. (The only way to know if a sample is representative is to subsequently audit the entire population.) However, auditors can increase the likelihood of a sample being representative by using care in designing the sampling process, sample selection, and evaluation of sample results.

❖ A sample result can be **non representative** due to **non sampling error** or **sampling error**. The risk of these two types of errors occurring is called **non sampling risk** and **sampling risk**respectively.

➢ ***Non sampling risk*** is the risk that audit tests do not uncover existing exceptions in the sample.

- The **two causes** of **non sampling risk** are:

i. The auditor's failure to recognize exception because of exhaustion, boredom, or lack of understanding of what to look for.

ii. Inappropriate or ineffective audit procedures.

➢ ***Sampling risk*** is the risk that an auditor reaches an incorrect conclusion because the sample is not representative of the population.**Sampling risk** is an inherent part of sampling that result from testing less than the entire population.

✓ Auditors have two ways to control sampling risk:

a. Adjust sample size

b. Use an appropriate method of selecting sample items from the population

Statistical Versus Non-statistical Sampling

- **Audit sampling methods** can be divided into **two** broad categories: statistical sampling and non-statistical sampling.

Similarities:
Step 1: Plan the sample
Step 2: Select the sample and perform the tests
Step 3: Evaluate the results

Differences:

- ***Statistical sampling*** allows the quantification of sampling risk in planning the sample (Step 1) and evaluating the results (Step 3). Or by applying mathematical rules, auditors can quantify (measure).
  Advantages of Statistical Sampling
  - ✓ Design efficient samples
  - ✓ Measure sufficiency of evidence
  - ✓ Objectively evaluate sample results
- In ***non-statistical sampling*** those items that auditors do not quantify sampling risk. Instead, the auditor believes will provide the most useful information are selected. Non statistical sampling is often termed **judgmental sampling**.

Probabilistic Versus Non-probabilistic Sample Selection

- ✓ ***Probabilistic sample*** *selection* is a method of selecting a sample such that each population item has a known probability of being included in the sample. It is commonly associated with **statistical sampling**.
- ✓ ***Non-probabilistic sample selection*** is amethod in which the auditor uses **professional judgment** rather than probabilistic methods. It is commonly associated with **non-statistical audit sampling**.

➢ **Non probabilistic (judgmental) sample selection methods include the following:**

1. Directed sample selection
2. Block sample selection
3. Haphazard sample selection

1. ***Directed sample selection*** is the selection of each item based on auditor judgmental criteria. (I.e. auditors deliberately select each item in the sample based on their own judgmental criteria instead of using random selection).

Commonly used approaches include:

- ➢ Items most likely to contain misstatements
- ➢ Items containing selected population characteristics
- ➢ Large dollar coverage

2. ***Block sample selection*** is the selectionof several items in sequence.(I.e. auditors select the first item in a block, and the remainder of the block is chosen in sequence). For example, assume the block sample will be a sequence of 100 sales transactions from the sales journal for the third week of March. Auditors can select the total sample of 100 by taking 5 blocks of 20 items, 10 blocks of10, 50 blocks of 2 or one block of 100.
3. ***Haphazard sample selection*** is the selection of items without any conscious bias on the part of the auditor.
   - In this method, the auditor selects the sample items without intentional bias to include or exclude certain items in the population.
   - Haphazard selection, in which the auditor selects the sample without following a structured technique.
   - In such cases, the auditor selects population items without regard to their size, source, or other distinguishing characteristics.

➢ **Probabilistic sample selection methods include the following:**

1. Simple random sample selection
2. Systematic sample selection
3. Probability proportional to size sample selection
4. Stratified sample selection

1. A **simple *random sample***is one in whichevery possible combination of elements in the population has an equal chance of constituting the sample.
   - ❖ Selection of random sample includes:
     i. Random number tables
     ii. Computer generation of random numbers
2. **Systematic sample selection:**(also called systematic sampling) the auditor calculates an interval and then selects the items for the sample based on the size of the interval.
   - The interval is determined by dividingthe population size by the number of sample items desired.The advantage of systematic selection is its ease of use.
3. **Probability proportional to size:** A sample is taken where the probability of selecting any individual population item is proportional to its recorded amount (PPS).It is evaluated using non - statistical sampling or monetary unit statistical sampling.
4. **Stratified sample selection**: The population is divided into subpopulations by size and larger samples are taken of the larger subpopulations. It is evaluated using non statistical sampling or variables statistical sampling.

- In many auditing situations, it is advantageous to select samples that emphasize population items with larger recorded amounts. Thus, this done by **probability Proportional to Size and Stratified Sample Selection.**

Attributes versus variable sampling

Attributes sampling enables the auditors to estimate the rate of occurrence of certain characteristics in the population. It is frequently used in performing **tests of controls**. For example, the auditor might use attributes sampling to estimate the percentage of the cash disbursements processed during the year that were not approved.

Variables sampling on the other hand provide the auditors with an estimate of a numerical quantity, such as the dollar balance of an account. This technique is primarily used by auditors to perform **substantive tests**. For example, variables sampling might be used to plan, perform, and evaluate a sample of accounts receivable selected for confirmation.

Sample Size

There is no specific standard on how to compute samples size to be selected from a population in a given examination. However, size of sample selected for examination is affected by the amount of sampling risk allowable and characteristics of the population being tested. To reduce sampling risk to a desired level, auditors have to increase sample size. Similarly, sample size increases when the population size increases.

Audit Sampling for Exception Rates

The ***occurrence rate***, or ***exception rate***,is the ratio of the items containing the specific attribute to the total numberof population items. Or **Exception rate** — the percent of items in a population that include exceptions in prescribed controls or monetary correctness

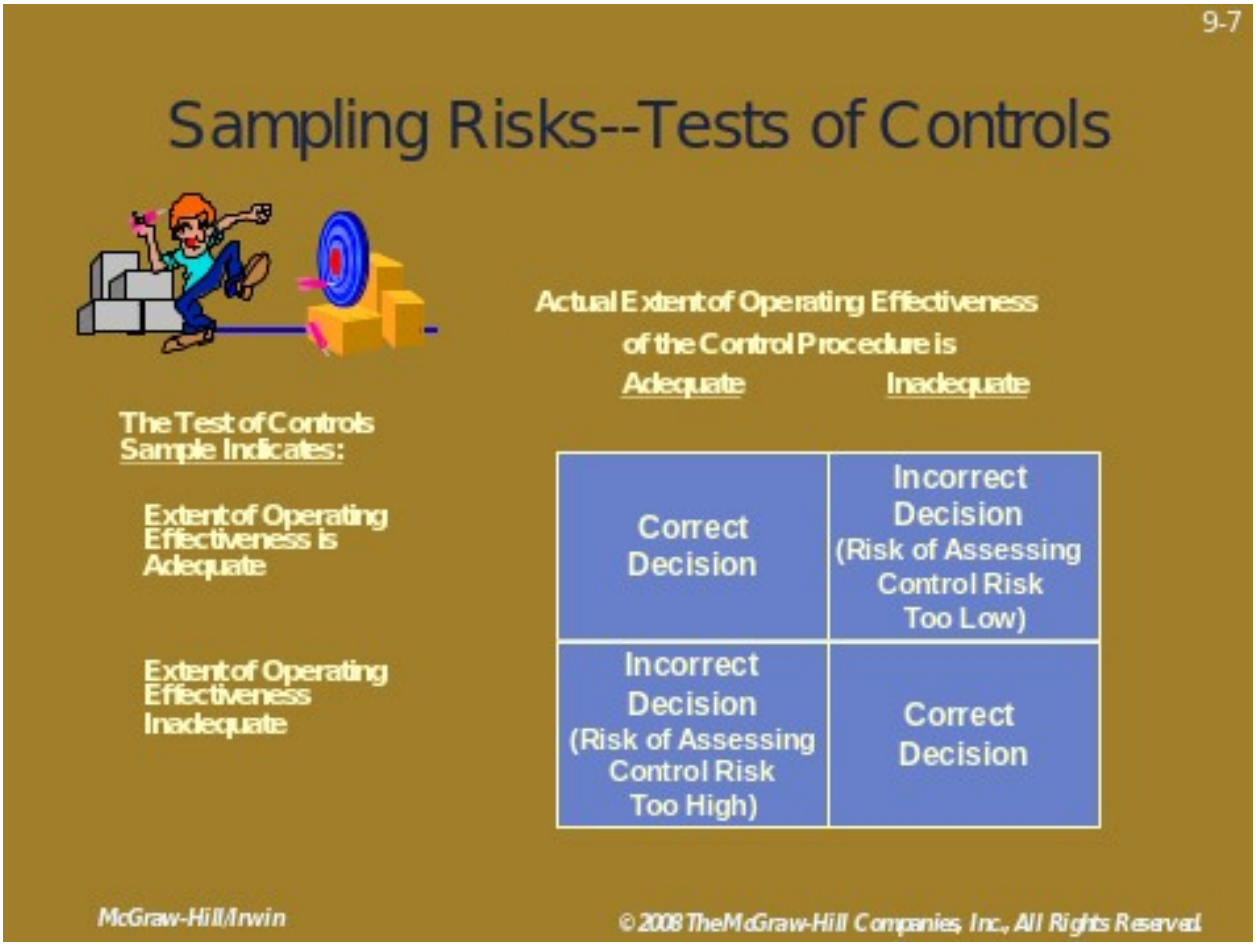
Following are types of exceptions in populations of accounting data:

1. Deviations from client's established controls
2. Monetary misstatements in populationsof transaction data
3. Monetary misstatements in populations ofaccount balance details

Audit Sampling for Tests of Controls

Test of controls are used to determine whether the client's internal control system is effective enough to prevent or detect material misstatements in the financial statements. Besides the results of tests of controls are vital in determining whether controls prescribed by management are properly followed or not. Auditors are concerned with the risk of assessing control risk too high and risk of assessing control risk too low. This is because of the fact that the tests of

controls have an impact on the efforts (substantive tests) auditors have to perform in discovering material misstatements in the financial statements.



Audit Sampling for Substantive Tests

Substantive tests are designed to detect material misstatements that may exist in the financial statements. Hence the sampling techniques should be designed in such a way that auditors are able to estimate the amount of misstatement in a particular account balance. Based on the sample results therefore auditors are able to conclude whether there is high risk of material misstatement in the account balance.

Sampling Risks--Substantive Tests



The Substantive Procedure Sample Indicates	The Population Actually is: Not Materially Misstated	The Population Actually is: Materially Misstated
Misstatement in Account Exceeds Tolerable Amount	Incorrect Decision (Risk of Incorrect Rejection)	Correct Decision
Misstatement in Account Is Less Than Tolerable Amount	Correct Decision	Incorrect Decision (Risk of Incorrect Acceptance)

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