**Exam Review of Audit Sampling**

# Auditing Sampling

***Audit sampling*** is defined as: selection and evaluation of **less than 100** percent of the items in a population of audit relevance selected in such a way that the auditor expects the sample to be **representative** of the population and thus likely to provide a **reasonable basis** for conclusions about the population.

**Sampling risk**: the risk that the sample drawn is **not** representative of the population and that, as a result, the auditor will reach an **incorrect conclusion** about an account balance or class of transactions based on the sample.

**Type I and Type II errors:** the decision errors that an auditor can make when deciding whether the sample evidence supports or does not support a test of controls or a substantive test.

For **tests of controls**, we have the following relationships:

* Type I = Risk of assessing control risk too high.
* Type II = Risk of assessing control risk too low.

For **substantive tests**, we have the following relationships:

* Type I = Risk of incorrect rejection.
* Type II = Risk of incorrect acceptance.

 **Type I error**-conducting more work than necessary

 **Type II error** the auditor failing to detect a material misstatement in the financial statements that could lead to litigation

**Planning**

1. ***Determine the test objective(s).***:
	1. to evaluate the operating **effectiveness** of the internal control(s) for the purpose of a public company internal control audit or
	2. to determine the **degree of reliance** that can be placed on controls for a financial statement audit.
2. ***Define the population characteristics:***
	1. Define the sampling population.
		* (1) all or a subset of the items that constitute the class of transactions which make up the sampling population,
		* (2) the auditor must determine that the population from which the sample is selected is appropriate for the audit assertion being tested, and
		* (3) the auditor must determine that the physical representation of the population (or frame) is complete.
	2. Define the sampling unit..
	3. Define the control deviation conditions.
3. ***Determine the sample size***, using the following inputs:
	1. The desired **confidence level** or risk of incorrect acceptance. The risk that the sample results will support a conclusion that the control is functioning effectively, when in truth it is not, can result in assessing control risk too low. This risk impacts the effectiveness of the audit. When the auditor intends to rely on controls, the confidence level is set at 90 or 95 percent, meaning the auditor is willing to accept a 10 to 5 percent risk of accepting the control as effective, when in fact it is not. The students should remember that there is an inverse relationship between the risk of assessing control risk too low and the size of the sample.
	2. **The tolerable deviation rate**. The tolerable deviation rate is the maximum deviation rate the auditor is willing to accept and still rely on control procedures. sample size is inversely related to tolerable deviation rate.
	3. **The expected population deviation rate**. This is the rate that the auditor expects to exist in the population. The auditor can develop this estimate based on prior years’ results or on a pilot test. There is a direct relationship between expected population deviation rate and sample size.
	4. **The population size**. The population size has little or no effect on the sample size unless the population is relatively small (less than 1,000). Normally, auditors sample from populations larger than a few hundred items, so population size is commonly ignored in determining sample size. **Performance**
4. ***Select sample items***.

***Statistical*** sampling application is used,

Sample selection process must allow selection of a sample that is **representative** of the population.

**Random** versus **systematic** selection.

1. ***Perform the auditing procedures***.

Four items can affect a sampling application for tests of controls:

1. Voided documents.
2. Unused or inapplicable documents.
3. Inability to examine a sample item.
4. Stopping the test before completion.

 Understand and analyze deviations observed:

 **Evaluation**

1. ***Calculate the sample deviation and the computed upper deviation rates.***
2. ***Draw final conclusions***.

**Monetary-Unit Sampling**-The conclusion will be in monetary terms rather than a rate of occurrence.-This sampling technique has many important applications in public accounting.-It is primarily designed to test for overstatement errors.

**Classical Variables Sampling**