

## Exhibit C

# Table of Contents

<b>Chapter 1 Purpose &amp; Requirements of Sampling for Tax Auditing</b> .....	<b>1</b>
Statutory Requirements .....	1
Generally Accepted Auditing Standards .....	2
Generally Recognized Sampling Techniques .....	2
Statistical vs. Non-statistical Sampling .....	4
<b>Chapter 2 Overview of the Sampling Process</b> .....	<b>5</b>
Overview .....	5
Gather Information to Plan the Sample .....	5
Define the Population and Stratify into Sub-populations as Needed .....	7
Compile Base Amounts .....	8
Establish correspondence .....	10
Choose the Type of Sampling Unit and Determine the Sample Size .....	11
Select the Sample Units .....	12
Perform an Initial Evaluation .....	14
Perform a preliminary sample (short-test) .....	14
Evaluate the short-test and make a stop-or-go decision .....	14
Complete the sample .....	15
Project the results to the population .....	16
Evaluate the sample .....	16
<b>Chapter 3 Transaction Sample – Dollar Stratified</b> .....	<b>17</b>
Contested CAMS Sample Sizes .....	19
<b>Chapter 4 Transaction Sampling – Manual</b> .....	<b>21</b>
<b>Chapter 5 Cluster Sampling</b> .....	<b>26</b>
<b>Chapter 6 Time Period Sampling</b> .....	<b>33</b>
Multiple Outlet Time Period Samples .....	36
<b>Chapter 7 Written Notification of Sampling &amp; Estimation Procedures</b> .....	<b>41</b>
Notification of Sampling Procedures for State Tax Audit .....	42
Notification of Estimation Procedures for State Tax Audit .....	45
Guidelines for Notification of Estimate .....	46
<b>Chapter 8 Evaluation &amp; Analysis</b> .....	<b>48</b>
Preliminary & Periodic Evaluation .....	48
Final Evaluation .....	48
Analysis of Sampling Risk and Variation Percentage .....	49
Analysis of Errors .....	50
Analysis of Projection Bases .....	51
Summary .....	54

*Table of Contents* **Sampling Manual**

**Chapter 9 Special Topics** ..... 56

- Purchases ..... 56
- Negative Transactions ..... 57
- Avoidance of Double Taxation ..... 57
- Corrected Errors..... 58
- Bad Debts..... 59
- Credit Memos ..... 59
- Tax-Only Credit Memos and Invoices..... 59
- Over-accrual of Use Tax ..... 61
- Rate Change Adjustment for Local Tax Projections ..... 61
- Local Tax Law Changes ..... 62
- Voided Transactions..... 66
- Missing Invoices ..... 67
- Fiscal calendar vs. reporting calendar ..... 67
- One Error..... 67
- Taxpayers' Samples ..... 68

**Disclaimer:** This manual has been written for the purposes of a training tool and as a reference guide for the auditor. Any references to taxability, administrative policies, laws, and rules are subject to change due to administrative hearings and actions of the courts or legislature. While the content of the manual is current as of the revision date, the reader is responsible for any changes occurring after this date and should verify the current status of any information by contacting the Comptroller of Public Accounts toll free at 1-800-252-5555.

## Chapter 1

# Purpose & Requirements of Sampling for Tax Auditing

### **Statutory Requirements**

---

The Comptroller of Public Accounts has the statutory authority to conduct sample audits per Section 111.0042 of the tax code. The use of sampling techniques is appropriate if any of the following conditions exist:

- The taxpayer's records are so detailed, complex or voluminous that an audit of all detailed records would be unreasonable or impractical.
- The taxpayer's records are inadequate or insufficient, so that a competent audit for the period in question is not otherwise possible.
- The cost of an audit of all detailed records to the taxpayer or to the state will be unreasonable in relation to the benefits derived, and sampling procedures will produce a reasonable result.

Section 111.0042 of the tax code also states two ways that taxpayers can challenge samples:

- If a taxpayer can demonstrate that a transaction in a sample period is not representative of the taxpayer's business operations, the transaction shall be eliminated from the sample and be separately assessed in the audit.
- If the taxpayer demonstrates that any sampling method used by the comptroller was not in accordance with generally recognized sampling techniques, the audit will be dismissed as to that portion of the audit established by projection based upon the sampling method, and a new audit may be performed.

Thus, it is imperative that the auditor designs the sample to reflect as nearly as possible the normal business operations and follows generally recognized sampling techniques.

Also imperative is that sampling should not be utilized when records are inadequate to reflect accurately the business operations of the taxpayer. Without good internal controls and records, the auditor should determine the best information available and base the audit report on that information (i.e., estimate).

Regardless of whether a sample or estimate procedure is performed, Section 111.0042 states "Before using a sample technique to establish a tax liability, the comptroller or his designee must notify the taxpayer in writing of the sampling procedure to be used." Per Hearing No. 43,877 "Moreover, with regard to estimation, Section 111.0042 does not contain an express requirement mandating the Comptroller to issue a written notification of estimation procedures, even though the agency does so as a matter of standard practice. See Comptroller's Decision No. 37,262 (1999) (The requirements of Section 111.0042(c) do not apply to estimated audits.) And if no statutory requirement exists for such written notification, then there is no legal basis to support Petitioner's request for deletion of the estimated exams."

### **Professional Standards**

The Comptroller of Public Accounts uses sampling to increase the overall coverage and efficiency of the tax audit program. The use of sampling has been authorized by statute. The sampling procedures used in the audit of any individual taxpayer must be in accordance with generally recognized sampling techniques. SAS No. 39 and Audit Sampling issued by the American Institute of Certified Public Accountants (AICPA) are the primary source-

## Chapter 2

# Overview of the Sampling Process

### Overview

---

- Gather information to plan the sample
- Define the population and stratify into sub-populations as needed
- Compile base amounts
- Establish correspondence
- Choose the type of sampling unit and determine the sample size
- Select the sample units
- Perform an initial evaluation
- Perform a preliminary sample (short-test)
- Evaluate the short-test and make a stop-or-go decision
- Complete the sample examination.
- Project the results to the population.
- Evaluate the sample results.

Many of the steps listed above are not mutually exclusive. In fact, the first four are interdependent. Proper planning and decision-making in each of the above steps by the auditor will greatly affect the desired goals of the agency:

- Perform the audit in accordance with generally accepted auditing standards and generally recognized sampling techniques
- Perform the audit to yield a fair and impartial result in accordance with the normal conditions of the business
- Perform the audit in the most efficient manner

### Gather Information to Plan the Sample

---

In order to successfully complete the steps in the sampling process, relevant information about the taxpayer should be obtained. The auditor should understand the normal conditions of the taxpayer's business and plan the sample accordingly. Listed below are a number of questions regarding accounting, reporting, and record storage systems. Knowledge of these items should improve the quality of decision-making.

#### **Accounting**

- Has the company experienced any mergers, acquisitions, or divestitures? (consider separate samples for separate entities; otherwise, the sample will be invalidated if an assessment is made against the incorrect entity and, also, changes in ownership/management may affect the type and frequency of error)
- Has the company changed identity (sole proprietor to corporation; corporation to limited liability partnership; etc.)? (consider separate samples for separate entities; otherwise, the sample will be invalidated if an assessment is made against the incorrect entity and, also, changes in ownership/management may affect the type and frequency of error)
- Does the taxpayer have a written accounting procedures manual for use by employees? (establishes internal control so that similar items will be handled in same manner; if poor internal control exists, options other than a sample should be considered.)
- Does a numbered chart of accounts exist? (assists in identifying accounts of interest)

- Are all the records computerized?
- For what periods are computer records available?
- Has there been a change in hardware or software during the audit period? Did the change affect the account contents, storage of records, or the ability to electronically access the information?
- What source document information is captured in the computerized records?
- Do journals, invoice registers, accounts payable journals, voucher, or check registers, expense distributions, asset registers, depreciation schedules, or other summary records exist for all periods in the audit? What information is contained in each?
- Do customer and vendor lists exist for all periods?
- Do source documents exist for the entire audit period?
- What is the volume of source documents? This is a required entry in the audit plan. If source documents are not available, consider detailing or sampling the segments where the information is available and making a reliable estimate for the remaining segments.
- What is the disposition of each source document? Are they filed in numerical sequence, customer or vendor files, sent to another party, filed with another document?

This first step of gathering information is extremely important. Most information and answers to many of the questions above will be obtained from the audit questionnaire, contacting the taxpayer, and performing the entrance conference. However, the auditor can obtain other information by searching the Internet. Perhaps the company under audit has a Web site that will identify many of the products or services provided. Also, publicly held companies are required to file reports with the Securities and Exchange Commission (<http://www.sec.gov/>), and this information may be contained on the company's Web site.

The more information obtained upfront generally results in a more efficient and effective sample. Remember, without good internal controls or records, sampling should not be utilized.

### **Define the Population and Stratify into Sub-populations as Needed**

Numerous criteria exist to identify appropriate subpopulations (homogeneous groups) in a manner that will increase the accuracy of a sample. Some examples include the following:

- Outlets or locations
  1. Metro vs. rural
  2. Opened for the entire audit period vs. opened for only part of the audit period
  3. Mall store vs. free-standing store
- Divisions
- Departments
  1. Production vs. non-production departments
  2. Corporate office vs. sales branch
- Product lines
- Type of customer
  1. Reseller vs. end user
  2. Cash vs. credit
  3. Manufacturer
  4. Contractor
  5. Farmer
  6. Prices
  7. High dollar items vs. low dollar items
- Time periods
  1. Law changes
  2. Personnel or management changes

### **Judgment Selection**

Judgment selection should not be confused with the term judgmental sampling. Judgment selection refers to the process by which the auditor actually exercises his or her judgment in the selection of the sample items. Selection by judgment alone should be avoided. Because the auditor could build in bias, it is very difficult to defend. However, in limited situations, this method may be the only option (e.g. incomplete records). The decision to use judgment selection should be made only with the understanding and approval of the group supervisor.

### **Perform an Initial Evaluation**

---

If possible, the auditor should attempt to evaluate all of the selected sample invoices in the short-test BEFORE pulling and examining source documents for tax compliance. This can be more difficult for transaction and cluster samples. If sales journals, purchase journals, or some other type of document is available listing individual transactions, the auditor should be able to quickly calculate the sample and population base averages and the variation percentage. The percentage of variation is one indicator as to whether the sample selected is representative of the population. The variation percentage should be 15 percent or less for manual samples and 8 percent or less for dollar stratified samples.

$$\text{Sample Base Average} = \frac{\$ \text{ Amount of Sample Base}}{\# \text{ of Sample Units}}$$

$$\text{Population Base Average} = \frac{\$ \text{ Amount of Population Base}}{\# \text{ of Units in Population}}$$

$$\text{Variation Percentage} = \frac{\text{Difference between sample base and population base averages}}{\text{Higher of sample base or population base average}}$$

OR

$$= 1 - \frac{\text{Lower of sample or population base average}}{\text{Higher of sample or population base average}}$$

The variation percentage is calculated as absolute value.

### **Perform a preliminary sample (short-test)**

---

The preliminary sample, commonly referred to as the short-test, consists of reviewing the first 25 percent of the invoices selected from the minimum sample size. The items should be reviewed in the order selected so that items are reviewed throughout the audit period. This step is normally used for manual samples. In dollar-stratified samples so few items are sampled that it is important to review the entire selection.

### **Evaluate the short-test and make a stop-or-go decision**

---

Efficiency dictates that excessive hours not be spent in an unproductive manner. If no errors are found in the short-test, the sample examination should be abandoned. However, before deciding whether to abandon the sample, the auditor must be reasonably sure that the short-test results are representative of the population. Until the auditor evaluates the short-test by comparing the results to the population, there is no way of knowing whether the sample was representative and, consequently, whether finding no errors was a valid conclusion.

The following tests should be performed on the preliminary sample and documented in the audit plan regardless of whether errors are noted:

1. **Compare the average dollar value of all sample units to the average dollar value of the same type of units in the population.** Large differences in this comparison may indicate that the sample is not proportional to the population or that the sample units were selected from a sub-population rather than the

**Step 3 – Perform an initial evaluation**

If possible, the auditor should attempt to evaluate all of the selected sample invoices in the short-test BEFORE pulling and examining source documents for tax compliance. If sales journals, purchase journals, or some other type of document is available listing individual transactions, the auditor should be able to quickly calculate the sample and population base averages and the variation percentage. The variation percentage is one indicator as to whether the sample selected is representative of the population. The variation percentage should be within 15 percent for a manual sample.

Sample Base Average =  $\frac{\$ \text{Amount of Sample Base}}{\# \text{ of transactions in Sample}}$

Population Base Average =  $\frac{\$ \text{Amount of Population Base}}{\# \text{ of transactions in Population}}$

Variation Percentage =  $\frac{\text{Difference between sample and population base averages}}{\text{Higher of sample or population base average}}$

OR

=  $1 - \frac{\text{Lower of sample or population base average}}{\text{Higher of sample or population base average}}$

Example: Assume that 75 items are selected for the short-test for a sales sample. Using the sales journal, the auditor compiles the sample base amounts and compares to the population base to verify that the variation percentage is within 15 percent.

	Sample Base Short-Test	Population Base
Dollars	\$2,666.00	\$1000,000.00
Units	75	2,750
Average	\$35.55	\$36.36
Variation Percentage	= $\frac{36.36 - 35.55}{36.36}$	
	OR	
	= $1 - 35.55/36.36$	
	= 2.23%	

**Step 4 – Perform a preliminary sample (short-test)**

The preliminary sample, commonly referred to as the short-test, consists of reviewing the first 25 percent of the invoices selected from the minimum sample size computed in Step 1. The items should be reviewed in the order selected so that items are reviewed throughout the audit period. For example, if the minimum sample size computed in Step 1 is 300, the first 75 invoices selected of the 300 should be reviewed.

**Step 5 – Evaluate the short-test and make a stop-or-go decision**

Efficiency dictates that excessive hours not be spent in an unproductive manner. If no errors are found in the short-test, the sample examination should be abandoned. However, before deciding whether to abandon the sample, the auditor must be reasonably sure that the short-test results are representative of the population. Until the auditor evaluates the short-test by comparing the results to the population, there is no way of knowing whether the sample was representative and, consequently, whether finding no errors was a valid conclusion.



### Step 8 – Evaluate the short-test and make a stop-or-go decision

Efficiency dictates that excessive hours not be spent in an unproductive manner. If no errors are found in the short-test, the sample examination should be abandoned. However, before deciding whether to abandon the sample, the auditor must be reasonably sure that the short-test results are representative of the population. Until the auditor evaluates the short-test by comparing the results to the population, there is no way of knowing whether the sample was representative and, consequently, whether finding no errors was a valid conclusion.

The following tests should be performed on the preliminary sample and documented in the audit plan regardless of whether errors are noted:

1. **Compare the average dollar value of all sample units to the average dollar value of the same type of units in the population.** Large differences in this comparison may indicate that the sample is not proportional to the population or that the sample units were selected from a sub-population rather than the population that generated the summary amounts. If the variation percentage is over 15%, the auditor should analyze both the population and sample to identify and verify the reason for the difference.
2. **Compute and compare the percentage of non-taxed sales/purchases charged to accounts of interest in the sample to the percentage of non-taxed sales/purchases charged to accounts of interest in the population.** If both of these percentages are computed on the dollar value of the transactions, a difference may indicate an incomplete population or dollar value/invoice mix problem that will need to be addressed by the auditor. For a detailed, electronic population file, this test is required.

If errors are noted, perform the following additional tests and document in the audit plan:

3. **Compute the percentage of error by dividing all errors by the total of all items reviewed in the short-test (i.e., the sample base).** This percentage of error can be used to compute the potential value of the sample, if any, by projecting that error to the appropriate population total. The error rate will also be used to verify frequency in future tests should the auditor decide to continue the sample.
4. **Compare the average dollar value of all errors noted to each individual error.** This may help to identify particular classes of errors or items that appear to be extraordinary. Further stratification of the sample and/or projection procedures may be indicated.

These tests will allow the auditor to verify and document completeness of the population and modify the sampling procedure, if necessary, before additional time is spent in an unproductive manner.

The decision to continue the sample should be based on the materiality of any errors noted (percentage of error multiplied by the population base multiplied by the tax rate) and the estimated time required to complete the examination. The decision of how much is necessary to justify continuing is a decision the auditor and supervisor should make based on guidelines determined by division management.

$$\frac{\$ \text{ Errors}}{\$ \text{ Sample Base}} = \text{Percentage of Error} \times \$ \text{ Population Base} \times \text{Tax Rate} = \text{Tax Due}$$

### Step 9 – Complete the sample

If sufficient material errors have been noted in the short-test to justify completing the sample, the auditor should issue the sampling notification. During the examination of the remaining 75 percent of the sample, the auditor should periodically review the sample results. Calculating the error rate, analyzing the type of exceptions noted, and reviewing the average dollar amount of errors and bases will alert the auditor to any changes that may be necessary to the sample such as refinement of the population or sub-population and increased sample size.

### **Step 3 – Perform a preliminary sample**

The preliminary sample, commonly referred to as the short-test, consists of reviewing the first 25 percent of the outlet time periods selected from the minimum number of outlet time periods for the sample. The items should be reviewed in the order selected. For example, if 80 outlet months were the sample unit, 20 outlet months should be reviewed in the short-test.

### **Step 4 – Evaluate the short-test and make a stop-or-go decision**

Efficiency dictates that excessive hours not be spent in an unproductive manner. If no errors are found in the short-test, the sample examination should be abandoned. However, before deciding whether to abandon the sample, the auditor must be reasonably sure that the short-test results are representative of the population. Until the auditor evaluates the short-test by comparing the results to the population, there is no way of knowing whether the sample was representative and, consequently, whether finding no errors was a valid conclusion.

The following tests should be performed on the preliminary sample and documented in the audit plan regardless of whether errors are noted:

1. **Compare the average dollar value of all sample units to the average dollar value of the same type of units in the population.** Large differences in this comparison may indicate that the sample is not proportional to the population or that the sample units were selected from a sub-population rather than the population that generated the summary amounts. If the variation percentage is over 15%, the auditor should analyze both the population and sample to identify and verify the reason for the difference.
2. **Compute and compare the percentage of non-taxed sales/purchases charged to accounts of interest in the sample to the percentage of non-taxed sales/purchases charged to accounts of interest in the population.** If both of these percentages are computed on the dollar value of the transactions, a difference may indicate an incomplete population or dollar value/invoice mix problem that will need to be addressed by the auditor. For a detailed, electronic population file, this test is required.

If errors are noted, perform the following additional tests and document in the audit plan:

3. **Compute the percentage of error by dividing all errors by the total of all items reviewed in the short-test (i.e., the sample base).** This percentage of error can be used to compute the potential value of the sample, if any, by projecting that error to the appropriate population total. The error rate will also be used to verify frequency in future tests should the auditor decide to continue the sample.
4. **Compare the average dollar value of all errors noted to each individual error.** This may help to identify particular classes of errors or items that appear to be extraordinary. Further stratification of the sample and/or projection procedures may be indicated.

These tests will allow the auditor to verify and document completeness of the population and modify the sampling procedure, if necessary, before additional time is spent in an unproductive manner.

The decision to continue the sample should be based on the materiality of any errors noted (percentage of error multiplied by the population base multiplied by the tax rate) and the estimated time required to complete the examination. The decision of how much is necessary to justify continuing is a decision the auditor and supervisor should make based on guidelines determined by division management.

$$\frac{\$ \text{ Errors}}{\$ \text{ Sample Base}} = \text{Percentage of Error} \times \$ \text{ Population Base} \times \text{Tax Rate} = \text{Tax Due}$$