



Sampling in Sales and Use Tax Audits

Includes information on:

- Electronic Records
- Non-Statistical Sampling
- Statistical Sampling
- Special Situations in Sampling

TABLE OF CONTENTS

	PAGE
1. INTRODUCTION	3
2. DEFINITIONS	3
3. WHY IS SAMPLING USED?	4
4. WILL THE AUDIT USE SAMPLING?	4
5. COMPLETENESS OF RECORDS AND ELECTRONIC RECORDS	5
6. STATISTICAL AND NON-STATISTICAL METHODS	6
7. DESCRIPTION OF NON-STATISTICAL METHODS	6
A. Alpha Sample	6
B. Time-Based Sample.....	7
C. Stratified Block Sample	8
D. Systematic Sample	9
8. STEPS TO STATISTICAL SAMPLING METHOD	9
A. Data Cleansing	10
B. Identifying the Sample Unit	10
C. Refining the Sample Population.....	10
D. Stratifying the Sample Population	10
E. Defining Sample Size	11
F. Selecting the Sample.....	11
G. Reviewing Sampled Transactions	11
9. COMPUTING AND EVALUATING RESULTS OF STATISTICAL SAMPLE	12
A. Difference Estimator	12
B. Determining the Midpoint	12
C. Two-sided 90% Confidence Interval.....	12
D. Precision Standards.....	13
E. Proposed Audit Report.....	13
10. SPECIAL SITUATIONS IN SAMPLING	13
A. Date Transaction Occurs and Sample Population	13
B. Unusually Large Error Transactions.....	13
C. Missing Records	14
D. Misclassified and Misfiled Items	14
E. Double Inclusion	14
F. Reversal Entries or Adjustments	15
G. Law Changes	15
11. SAMPLING AND CLAIMS FOR REFUND	15
A. Option 1: Claim for Refund on Specific Basis	15
B. Option 2: Claim for Refund via Audit Sample	16
12. PROJECTING SAMPLE RESULTS TO OTHER OPEN YEARS	17
13. QUESTIONS ABOUT THE SAMPLE	17
APPENDIX A: DATA FILE STANDARDS – SALES RECORDS	19
APPENDIX B: DATA FILE STANDARDS – PURCHASE RECORDS	20

1. INTRODUCTION

Wisconsin law ([sec. 77.59\(2\)](#), Wis. Stats.), authorizes the Wisconsin Department of Revenue (department) to use sampling in sales and use tax audits. This publication gives information about the department's sampling methods. It explains why and when sampling is used, factors considered in determining type of sample, how results are calculated and special situations involving sampling.

See [Publication 501](#), *Field Audit of Wisconsin Tax Returns*, for information on the field audit process in general.

2. DEFINITIONS

AICPA – American Institute of Certified Public Accountants.

CAS (Computer Audit Specialist) – A department auditor who is specially trained in both auditing and statistics. All statistical samples and some non-statistical samples involve a CAS in an advisory role to the auditor.

Error – Transaction on which tax was not correctly paid; whether the transaction was taxable and went untaxed (positive error) or was nontaxable and was taxed (negative error).

Measure (of tax) – The dollar amount of a transaction before any applicable sales or use taxes. Generally, an error is quantified by its measure. In a sample, that measure of error is projected to the sample population and multiplied by the applicable tax rate(s).

Net Error – The sum of all errors. Since an error may be positive or negative, the net error is the remainder after negative errors are offset against positive errors.

Non-Statistical Sampling – Sampling method where a sample is selected on a basis other than random selection; therefore, its results cannot be analyzed using probability theory nor can sampling risk be measured. However, a properly designed and applied non-statistical sample can provide results that are accurate and effective.

Refund Item – Measure of tax paid in error on a transaction.

Sample Population – The entire set of sampling units from which a sample will be drawn. **Example:** If you pick a sample of ten playing cards from a standard deck, your sample population is the 52 cards in the deck. In an audit, the sample population may be refined to exclude parts of the business that are unlikely to have a sales or use tax impact. An audit may have two or more sample populations; such as separate ones for sales and purchases. (Sometimes, for clarity, the term *sample population* is simply called *population*. A less common, formerly used term for the sample population is *sample universe*.)

Sampling – Defined by the AICPA as: *The selection and evaluation of less than 100 percent of the population of audit relevance such that the auditor expects the items selected (the sample) to be representative of the population and, thus, likely to provide a reasonable basis for conclusions about the population. In this context, representative means that evaluation of the sample will result in conclusions that, subject to the limitations of sampling risk, are similar to those that would be drawn if the same procedures were applied to the entire population.* (AICPA, Clarified Statement on Auditing Standards (SAS) No. 122 (AU-C sec. 530.05).)

Sampling Rate – The ratio of the number of sampling units selected in the sample to the number of sampling units in the sample population.

Sampling Risk – Probability that the sample results are not representative of the entire population.

Sampling Unit – A defined individual element of the sample population. From the example above where a deck of cards represents the sample population, the sampling unit is one card. In a sales and use tax audit, a sampling

unit could be a line item on an invoice, a whole invoice, a general ledger book entry, a line item in a list or journal, or a group of invoices. Each sampling unit is in one of three mutually exclusive categories:

- **Selected:** Selected from the sample population for review (from the example above, the ten cards you pick from the deck)
- **Non-selected:** Transactions in the sample population, but not selected for review (from the example above, the 42 cards you did not pick)
- **Excluded:** Transactions left out of the sample population – either because the transaction is unlikely to have a sales or use tax impact (ex: health insurance premiums) or is more appropriately reviewed on a specific basis (e.g., capital assets). From the example above, excluded transactions would be cards from a different deck

Source Document – A record containing the detail of a transaction entered in a data processing accounting system. This could be a vendor invoice, purchase order or customer sales invoice. A source document may be in paper or electronic format.

Specific Basis – When the amount of an error is not projected in a sample because it was excluded from the sample population. **Example:** To avoid distortive results, a sample may be designed to exclude all capital assets; the auditor would review all capital assets and compute any errors on a specific basis.

Statistical Sampling – Sampling method where the sample is randomly selected, and probability theory is used to evaluate the sample results.

Stratify – To section, divide or segment a sample population. Stratifying (or, *stratification*) may result in classes or ranges of transactions, or both:

- **Class:** A group of sampling units with similar attributes (e.g., sales, fixed assets, selected expense accounts or types of expenses such as utilities)
- **Range (also known as stratum):** A group of sampling units in the same range of dollar amounts (e.g., all line items between \$500 and \$999)

3. WHY IS SAMPLING USED?

Sampling is generally used when it is not efficient to review 100% of the source documents. It may also be used when source documents are missing or when reviewing all of them would be impractical. Sampling can benefit both you and the department by decreasing the amount of time to complete the audit. The desired goal is to minimize sample size while maintaining a reasonably accurate result.

4. WILL THE AUDIT USE SAMPLING?

Shortly after you are notified of a sales and use tax audit, you will be asked to complete a pre-audit questionnaire. This helps the auditor learn some of the basics about your business and records. The auditor will schedule an initial meeting with you (and your representative if you engage one) and part of that meeting is to discuss the best method to review the source documents, which may include sampling.

Note: If you are aware of areas where you may have paid tax in error during the audit period, it's best to discuss them with the auditor in this early planning stage of the audit. If sampling is used, those potential refund items may also be sampled.

Whether sampling is used depends on multiple factors learned from the pre-audit questionnaire and initial meeting, including:

- Volume of transactions
- Method of filing source documents
- Business process changes
- Accounting system, record maintenance, and reporting
- Products or services sold or manufactured
- Typical customers or vendors
- Changes to relevant tax laws, rules, and rates during the audit period

Wherever sampling is used, it is common that some types of transactions (e.g., capital assets) are excluded from the sample population and reviewed at 100% to avoid distortive results.

5. COMPLETENESS OF RECORDS AND ELECTRONIC RECORDS

The department often uses your electronic records to conduct a more efficient audit. This includes transaction data and information from accounting, enterprise, and point-of-sale software applications; as well as source documents stored electronically. The sample population may be easily defined and refined using electronic records, and the items sampled may even be electronic records themselves.

Generally, if you have electronic records and the auditor requests them in electronic format, you must provide them in electronic format. The auditor may also sample paper records (e.g., purchase invoices stored in file drawers). If records are not complete, the auditor may sample the available records and project the findings to those that are missing.

To ensure completeness, the auditor will need to:

- Trace accruals of sales tax and self-assessed use tax to amounts reported on your return
- Understand how your records identify the transactions where tax was accrued
- Tie electronic transaction data to trial balances or some other control total
 - While timing issues, manual adjustments to accounts, etc., may cause amounts to not match perfectly, at minimum they should closely agree

Guidelines for electronic records:

- One file per year is preferred
- Preferred data formats include Excel, Access, or delimited or fixed length text files
- Appendices [A](#) and [B](#) of this publication show the file layout that is generally preferred
- The department strongly recommends using a secure electronic platform for transferring data and information electronically. See [Fact Sheet 5100](#), *Electronically Transmitting Confidential Taxpayer Information*.

The auditor will work with you to satisfy the need for records in the most efficient way possible for your situation, and to set a reasonable timeline for providing the records.

6. STATISTICAL AND NON-STATISTICAL METHODS

The department uses both statistical and non-statistical sampling methods. The AICPA (SAS No. 39) states that either approach is valid and involves sampling risk. Statistical sampling requires using statistical formulas to determine sample size and directly measure sampling risk, while non-statistical sampling does not require such formulas.

In order to use a statistical sampling method:

- There must be a minimum of 10,000 sample units
- Adequate electronic transaction data must be available, including a trial balance in electronic format

Section [Tax 11.905\(4\)](#), Wis. Adm. Code, gives more specific criteria for statistical sampling.

Non-statistical sampling methods are common and include:

- Alpha sample
- Time-based sample
- Stratified block sample
- Systematic sample

The sampling method, whether statistical or non-statistical, is determined by the auditor and approved by a CAS and/or auditor's supervisor. The auditor will explain the sample method to you before reviewing the records.

7. DESCRIPTION OF NON-STATISTICAL METHODS

A. Alpha Sample

The alpha sample method is generally used when source documents are kept alphabetically by customer or vendor name. Customers or vendors are assigned alphabetically to each year of the audit so that each letter of the alphabet is included, and an approximately equal share of the source documents are reviewed for each year.

The additional measure of tax for the audit period is then computed as follows:

Errors from Sample x Periods in Audit = Total Additional Measure of Tax

Example: Assume the audit covers four years. An alpha sample of vendor invoices could be set up as follows:

- Year 1: Vendors A-D
- Year 2: Vendors E-J
- Year 3: Vendors K-R
- Year 4: Vendors S-Z

The vendor invoices selected in the sample are divided approximately evenly over the four-year audit period. From the entire population of vendor invoices, roughly 25 percent are selected in the sample.

Assume the following errors were found in the sample:

	Additional Taxable Purchases Found in Sample
Year 1: Vendors A-D	\$1,000
Year 2: Vendors E-J	\$1,200
Year 3: Vendors K-R	\$1,300
Year 4: Vendors S-Z	\$1,500
Total	\$5,000

The average annual additional measure of tax is \$5,000. This amount is multiplied by the number of years audited to arrive at the total additional measure of tax for the four-year audit period:

\$5,000 Errors from Sample x **4** Periods in Audit = **\$20,000** Additional Measure of Tax

The \$20,000 total additional measure is then allocated between the four years of the audit period. Generally, the allocation is done in proportion to total sales although a different basis of allocation may be used if it more accurately reflects the years in which the taxable transactions would have occurred.

B. Time-Based Sample

The time-based method is generally used when source documents are kept chronologically. Most common is to select one month's transactions for review for each year under audit. The additional measure of tax may be computed using one of two methods:

- Ratio projection method: Based on the ratio of errors found in the sample relative to total transactions selected in the sample
- Average projection method: Based on the average error per period sampled

Example: Assume the audit covers four calendar years. A one-month-per-year sample of sales transactions could be set up as follows:

- Year 1: October sales
- Year 2: July sales
- Year 3: February sales
- Year 4: April sales

From the entire population of sales transactions, roughly 8% will be selected in the sample (4 months selected / 48-month sample period = 8%). Based on the nature of your business activity, daily or weekly time-based samples may also be used.

Assume that the errors found in the sample, total sales for the month, and annual sales are as follows:

	Additional Taxable Sales Found in Sample	Total Sales in Month Sampled	Total Sales for Year
Year 1: October	\$1,000	\$650,000	\$8,000,000
Year 2: July	\$1,200	\$850,000	\$10,000,000
Year 3: February	\$800	\$1,100,000	\$15,000,000
Year 4: April	\$2,000	\$2,000,000	\$22,200,000
Total	\$5,000	\$4,600,000	\$55,200,000

Ratio Projection Method

The error ratio is **0.001807** ($=\$5,000/\$4,600,000$). This ratio is then multiplied by total transactions in the sample population for each year to arrive at the additional taxable sales for each year:

	Error Ratio	Total Sales for Year	Additional Taxable Sales
Year 1: October	.001807	\$8,000,000	\$8,696
Year 2: July	.001807	\$10,000,000	\$10,870
Year 3: February	.001807	\$15,000,000	\$16,304
Year 4: April	.001807	\$22,200,000	\$24,130
Total Additional Taxable Sales			\$60,000

Average Projection Method

The average error per month is **\$1,250** ($=\$5,000/4$ months sampled). The total error for the audit period is **\$60,000** ($=\$1,250 \times 48$ months). This amount is then allocated between the four years of the audit period in proportion to total sales for each year.

In this example, additional taxable sales were \$60,000 under either projection method. However, results may differ between the two methods. While the most common and accurate method is the ratio method, the average method may be appropriate in some cases; for example, where records are incomplete and annual totals cannot be verified.

C. Stratified Block Sample

A stratified block sample is generally used when electronic transactions are available for the entire audit period and source documents are imaged electronically, kept chronologically, or sometimes kept alphabetically. It may allow for a smaller sample size while reviewing a larger percentage of the dollar value of transactions.

In a stratified block sample, the auditor separates electronic transactions so that:

- Transactions over a maximum dollar amount are excluded from the sample population and reviewed in full
- Negative transactions and transactions under a minimum dollar amount are excluded from the sample population and not reviewed
- The remaining transactions are the sample population from which the auditor draws a sample (generally a time-based sample)

The projected results of the sample are added to the results of the review of transactions over the maximum dollar amount.

Example: Assume the audit covers four years. A stratified block sample could be set up as follows:

- Sales invoices over \$5,000 are reviewed in full (100%)
- Sales invoices \$5 or under are not reviewed
- For all sales invoices totaling between \$5.01 - \$5,000, the following are reviewed:
 - Year 1: October sales
 - Year 2: July sales

- Year 3: February sales
- Year 4: April sales

D. Systematic Sample

A systematic sample may be used when records are kept by job or project number. Systematic sampling is to pick a random starting place and select every "nth" job or project number. The population may be stratified into amounts or sizes of jobs or projects before selection takes place.

For the projects or jobs selected, the errors are totaled and an error ratio is used to determine the additional measure of tax for the audit period. If the sample is stratified, a different ratio is computed for each stratum or range.

Example: Assume projects for the audit period were stratified by billing amount and selected using a systematic sampling method. Findings and other relevant information are as shown below:

The computation of total error for each range is as follows:

Range	Error Ratio	Billing Amount: All Projects	Additional Measure of Tax (Error)
00	N/A (Excluded)	\$ 50,000	\$0
01	.04 (=\$5,000/\$125,000)	\$500,000	\$20,000
02	.02 (=\$10,000/\$500,000)	\$5,000,000	\$100,000
03	N/A (Specific basis)	\$3,000,000	\$18,000
Totals		\$8,550,000	\$138,000

For each range, the additional measure of tax is then allocated to each year based on the total project billings per year in that range.

8. STEPS TO STATISTICAL SAMPLING METHOD

If statistical sampling will be used, the auditor will generally ask to arrange a discussion to include:

- Someone familiar with your information technology and accounting systems
- Someone supervising the audit (you or your representative)
- A department CAS who is trained in auditing and statistics

You, the auditor, and CAS agree to the data format and specifications needed for the sample. You extract and transfer the data to the department, and the auditor verifies completeness.

The department's further processing steps include:

- Data cleansing
- Identifying the sample unit
- Refining the sample population
- Stratifying the sample population

- Defining sample size
- Selecting the sample
- Reviewing sampled transactions

Each step is described in more detail below.

A. Data Cleansing

Data cleansing ensures the data is correct, accurate, formatted correctly and does not contain unnecessary records.

Usually, transactional data includes reversal transactions such as credit memos, reclassifications between general ledger accounts, corrections to data entry errors, voided invoices and returned items. These are sometimes called "negative items."

While negative items may often be unnecessary and removed, the auditor must determine if the negative item has a matched "positive" in the data. If there is a matched positive in the data, both entries should be removed.

B. Identifying the Sample Unit

The sampling unit could be a line item on an invoice, an entire invoice, a general ledger book entry, a line item in a list or journal, or a group of invoices (cluster). The optimal sample unit is the line item on an invoice because it has the least variation.

C. Refining the Sample Population

The auditor and CAS will work with you to minimize the number of records in the sample population while still ensuring an accurate and fair result. This includes:

- Pre-screening the population to exclude transactions that are unlikely to have a sales or use tax effect (e.g., transactions in account for employee health insurance premiums)
 - If you believe you may have paid tax in error, inform the auditor which areas you believe you overpaid so the auditor can ensure those items are included in the sample population
- Considering alternative approaches to reviewing source documents. **Example:** In some situations, reviewing a file of employee procurement card (P-card) statements showing vendor name and transaction amount can eliminate the need to pull individual P-card transaction receipts.

For transactions excluded from the sample population, the CAS may generate a separate list of excluded transactions for reference purposes.

D. Stratifying the Sample Population

After the sample population is refined, the CAS will:

- Stratify the population into classes and dollar ranges, as appropriate, to make the sample as representative as possible
- Assign a random number to each transaction
- Create a stratification report which contains the number and dollar value of transactions by class, range, and year

E. Defining Sample Size

The CAS analyzes the stratification report using software designed to conduct "what if" tests on various sample sizes among the strata. Sample size varies from audit to audit. The department's general quantitative guidelines are:

- Based on dollar amount, a maximum of 15 ranges (strata) are defined for each class
 - Sampling rate increases as the dollar value of the range increases
- A minimum of 100 items are selected for each sampled range

The CAS consider several additional factors, including:

- The nature of the items sampled. **Example:** Advertising expenses might be sampled at a higher dollar amount when only a small percentage is taxable to Wisconsin.
- Reviewing the highest dollar range at 100%
- Not reviewing the lowest positive dollar range

The CAS's general objective for the sample is to achieve relative precision of 20% or better, although a less precise sample may be acceptable in some cases (see [sections 9.C. & D.](#) for illustration of the concept of sample precision). To improve precision, the sample size must increase exponentially. **Example:** To improve relative precision by 50%, the sample size would need to quadruple.

The auditor and CAS will work with you on strategies to minimize the sample size while achieving an acceptable precision level. These strategies may include:

- Further refining the population as described in [C.](#) above
- Raising the limit on the highest dollar range so the group of transactions reviewed at 100% is smaller
- Initiating a binding agreement for an agreed-upon sample size. Under the agreement, the taxpayer and DOR would agree to accept the sample even if relative precision does not meet the 20% standard.

F. Selecting the Sample

Once the size and parameters of the sample have been determined, the CAS:

- Assigns a sequence number to each sampled unit linking it to the data provided by the taxpayer
- Creates the list of sampled units for which you must provide source documents to the auditor for review
- Puts the list into an Excel workbook and adds a column called "Proj. Tax Amount" which shows the approximate dollar effect of the sampled unit if you owe tax on the item. This column is based on the highest possible tax rate of 5.5%.
- Generates and provides a report which shows specifications of the sample relative to the population including how many records are in each class and the sampling rate for each range

G. Reviewing Sampled Transactions

The auditor reviews the source documentation you provide for transactions selected in the sample.

During this review, it may become apparent that certain transactions or groups of transactions should have been pre-screened before the sample was pulled because they are not relevant to the audit. The auditor and

CAS generally cannot remove a single item from a sample. Depending on circumstances, they may be able to remove a whole group of items from the sample and sample population. However, in most cases, the modification does not significantly impact the projection.

Example: Assume 25% of your sales are to the U.S. Government, and it becomes apparent these sales were selected in the sample. You request U.S. Government sales be removed from the sample but do not want the sample redone since invoices and exemption certificates have already been pulled. The CAS can change the sample specifications and generate a new report eliminating U.S. government sales from both the sample and the sample population.

9. COMPUTING AND EVALUATING RESULTS OF STATISTICAL SAMPLE

The CAS computes the sample results by projecting errors found in the sample to the sample population. These may be either underpayments or overpayments. Any sampled range containing at least one error is projected.

The department uses a difference estimation method and the midpoint of a two-sided 90% confidence interval to compute the projection. Following is an explanation of these concepts:

A. Difference Estimator

The difference estimator is the net error found in the sample. The sum of net errors for each stratum (class/range) of the sample is used to estimate the net error for the entire sample population.

B. Determining the Midpoint

To determine the midpoint of the estimate (also called a point estimate), the CAS projects net error separately for each sampled stratum.

For any class/range of transactions reviewed on a specific basis (100%), no projection of net error is needed.

The example below shows how the net error amounts for each strata are projected and summed together to compute the midpoint of the estimate:

Class/Range	Items Sampled	Net Error	Net Error Rate per Item	Items in Sample Population	Projected Additional Measure of Tax
A/03	200	\$2,000	$\$2,000 / 200 = \10	10,000	\$100,000
A/04	250	\$10,500	$\$10,500 / 250 = \42	5,000	\$210,000
A/05	205	\$10,250	$\$10,250 / 205 = \50	2,025	\$101,250
A/06	(100% Review)	\$288,750	N/A	N/A	\$288,750
Total (represents midpoint of estimate for entire sample population)					\$700,000

C. Two-sided 90% Confidence Interval

The CAS then computes sample precision using a statistical formula to arrive at a two-sided 90% confidence interval.

From the example above, assume the results of the statistical formula show that precision of the sample is \$63,000. This means there is a 90% probability that the true additional measure of tax in the sample population is between \$637,000 and \$763,000. This range is called the "confidence interval."

The relative precision of the sample is computed by dividing the sample precision by the point estimate. In this case, the relative precision is 9% ($\$63,000/\$700,000$).

D. Precision Standards

The department considers relative precision of 20% or better to be acceptable. Note that the lower the relative precision, the more precise the sample.

If sample precision exceeds 20%, the CAS analyzes the reasons why. In many cases the sample is less precise because there are a significant number of overpayments in the sample. This does not necessarily mean the sample needs to be changed. The sample can still be acceptable even if relative precision exceeds 20%.

In general, the higher the sampling rate, the more precise the sample will be. A taxpayer may be willing to accept a less precise sample to reduce the sample size and expedite the audit. For these cases, the department offers the opportunity to enter a binding agreement in which both parties agree on the desired sample size and/or sample precision.

E. Proposed Audit Report

Once the additional measure of tax from the sample has been projected to the sample population, the auditor and CAS will develop schedules which compute the additional amount of tax or refund. Depending on the jurisdictions where the taxpayer has sales/purchases and periods involved, separate projections may be necessary for state, county, stadium, or other sales-based taxes.

The auditor incorporates the projection schedules into a proposed audit report which shows the additional tax or refund due. The proposed audit report includes the detail listing of errors.

10. SPECIAL SITUATIONS IN SAMPLING

A. Date Transaction Occurs and Sample Population

Part of defining the sample population is identifying the tax year of a transaction. This depends on how your books and records are kept. Once the sample population is identified and a transaction is selected in the sample, any tax determined to be underpaid or overpaid on the selected transaction is an error and projected for the entire audit period.

Example: Your sales transactions are being audited for tax years 2017 through 2020 (calendar year basis). Your electronic records use the accounting posting date to determine the tax year to which they apply. A statistical sample is performed on those records. An error was found in a transaction selected in the sample and posted in January 2017. The invoice date is December 31, 2016. Even though the invoice date is outside the audit period, the transaction is part of the audit determination because it was selected in the sample and the accounting posting date is within the 2017 through 2020 audit period.

B. Unusually Large Error Transactions

When a large dollar error is found in a sample, results could get distorted when the error is projected. Statistical samples and stratified block samples reduce this risk because they require review of higher dollar transactions on a specific basis or at an increased sampling rate.

After reviewing source documents, the auditor may need to modify a non-statistical sample to exclude an unusually large error transaction, whether the error is an additional taxable amount or refund amount. The facts and circumstances of your business determine what is an unusually large error.

When the auditor excludes an item from the sample to avoid distortion, they will often need to examine more documents for the modified sample.

Example: In a time-based sample of sales transactions, a selected transaction of \$15,000 is found to be an error. Most errors found range from \$500 to \$2,500 and the highest is \$3,000. To avoid distortion, the auditor excludes the \$15,000 transaction from the sample and asks to examine all sales transactions \$15,000 or larger. Total results are the projection of errors from the sample of sales under \$15,000, plus the sum of errors found in the review of all sales \$15,000 and over.

C. Missing Records

When records are missing, the results from the review of the available records may be projected into the period for which records are not available.

Example: Assume that sales records for Year 1 and six months of Year 2 were destroyed in a fire. The auditor may review records for the remaining half of Year 2 and Years 3 and 4 (either using a sample or a 100% examination), and then project those results into the period for which the records no longer exist.

If a transaction selected in a statistical sample has a missing invoice, the auditor may treat the missing invoice as an error. In some cases, the auditor may be able to use alternative approaches to conclude that the transaction was nontaxable or properly taxed.

D. Misclassified and Misfiled Items

The audit covers the records as they exist. If it is found that transactions are misclassified or misfiled, neither the sample nor projection need to change. However, if a misclassified or misfiled item causes an unusually large error to be projected with the sample, the sample may be modified as described in [B.](#) above.

Examples:

- If a \$2,000 purchase of office furniture is expensed rather than capitalized, the purchase would be included in the sample population for expenses
- If July is one of the selected months of a time-based sample and a sale in the month of June is filed with the July sales, it would be considered a July sale

E. Double Inclusion

The auditor may need to modify the sample so it does not include the same type of error twice. When this occurs, it is usually in an alpha sample where a specific type of item is purchased exclusively from a single vendor and the vendor changes during the audit period.

Example: During Years 1 and 2, all office supplies are purchased exclusively from Vendor A; in Years 3 and 4, office supplies are purchased exclusively from Vendor R. No office supply purchases were taxed. If the alpha sample for Year 1 included letters A-D and Year 3 included letters K-R, the total amount of error from office supply purchases would be overstated. Possible solutions include:

- Review the purchases from both vendors in their entirety

- Weigh the purchases from each office supply vendor by multiplying the errors by a factor (50%) before any sample projection

F. Reversal Entries or Adjustments

Sometimes a taxpayer's records include transactions that are later reversed or offset (e.g., credit memos). Ideally, the sample population will exclude matching "positive" and "negative" transactions that offset one another. However, taxpayer records do not always make this practical. If an unmatched positive is selected in the sample and is an error, the auditor needs to reduce it by the associated negative amount.

Example: A \$100 purchase from Vendor A was selected as part of the sample and determined to be in error. The taxpayer gave the auditor additional information showing that \$30 of that purchase was later returned. The auditor would reduce the error for that transaction to \$70.

G. Law Changes

Law changes can affect a sample if the taxability of a type of transaction changes during the audit period. For any sampling method, the sample population must separate transactions before and after the law change.

Example: A taxpayer is in the business of selling widgets and other products. A law change exempts widgets from sales tax starting in Year 4 of the audit. Two separate samples would be conducted. One sample would cover the first three years when the widgets are taxable; the second would cover Year 4 when the widgets were exempt.

11. SAMPLING AND CLAIMS FOR REFUND

If you know of any transactions where you may have overpaid tax, it's best to discuss those with the auditor as early in the audit as possible. The auditor may include those items as part of the audit (to offset additional tax due) if they know about them soon enough. Otherwise, the request for refund may be handled as a separate refund claim and determination.

If the auditor finds information showing you may have overpaid tax, they will explain why it appears tax could have been overpaid and advise you to review those transactions to determine if a refund is due. The auditor does not investigate each tax-paid transaction selected in the sample to determine if tax was paid in error. You are responsible for reviewing tax-paid transactions and proving any exemptions that apply.

For more specific details of filing claims for refund; including who may file, statutes of limitations, and required forms and documentation, see [Publication 216, Filing Claims for Refund of Sales or Use Tax](#).

If an audit uses sampling and a refund claim will be incorporated into the audit, you have two options for how to compile the claim:

- Option 1: Account for each refund transaction on a specific basis
- Option 2: Use the audit sampling methodology so that overpayments from items selected in the sample can be projected

Each option is described and illustrated in more detail below.

A. Option 1: Claim for Refund on Specific Basis

After the auditor reviews the claim, the verified measure of refund is computed by adding together the refund measure from each transaction. No projection is made.

If any claim for refund transaction was also selected in the sample, the transaction in the sample will be treated as zero error since specific adjustments will be made in the refund claim.

Example of Option 1: Assume an audit where 100% of capital asset purchases are reviewed and expense purchases are reviewed in a sample where vendors A-D are reviewed for Year 1, E-J for Year 2, K-R for Year 3, and S-Z for Year 4. The taxpayer erroneously paid tax on all expense purchases from Vendor D for each year, plus their only purchase from Vendor X in Year 2, which was a capital asset purchase. In the refund claim, the taxpayer would specifically list:

- All expense purchases from Vendor D for the four-year period (even though only the Year 1 purchases were selected in the sample)
- The capital asset purchase from Vendor X

Assuming proper documentation (including both sellers' signoff; see [Publication 216, Filing Claims for Refund of Sales or Use Tax](#), for more details), and that the amounts are verified, the total measure of refund would be the sum of the measure of overpaid tax from both vendors for all years.

The Year 1 purchases from Vendor D would be assigned an error value of zero in the sample because errors from all Vendor D purchases are already accounted for on a specific basis. Had the audit used a statistical sample, all Vendor D purchases selected in the sample (regardless of year) would be assigned an error value of zero.

B. Option 2: Claim for Refund via Audit Sample

The transactions in the refund claim are either accounted for on a specific basis or projected in the audit sample, depending on whether those transactions are included in the audit sample population.

While Wisconsin law does not authorize a taxpayer to use sampling on their own to compute a claim for refund, it does authorize the department to use sampling in an audit. Therefore, it is to your benefit to work with the auditor early in the process to plan for the sample population to include areas where you may have overpaid tax.

Refund items may be projected in a sample, regardless of whether the tax was paid on purchases or sales; or whether paid to the vendor or directly to the State.

Example of Option 2: Assume an audit where 100% of capital asset purchases are reviewed and expense purchases are reviewed in a sample where vendors A-D are reviewed for Year 1, E-J for Year 2, K-R for Year 3, and S-Z for Year 4. The taxpayer erroneously paid tax on all expense purchases from Vendor D for each year, plus their only purchase from Vendor X in Year 2, which was a capital asset. The amounts taxed in error for each year of the audit period were as follows:

		Year 1	Year 2	Year 3	Year 4
Vendor D	Expenses	\$1,000	\$100	\$500	\$400
Vendor X	Capital Asset		\$5,000		

Assuming proper documentation (including both sellers' signoff; see [Publication 216, Filing Claims for Refund of Sales or Use Tax](#), for more details), and that the amounts are verified, the total measure of refund would be \$9,000, computed as follows:

Projected Measure of Refund from Transactions Selected in Expense Sample (= \$1,000 x 4)	\$4,000
Measure of Refund for Capital Assets Reviewed at 100%	\$5,000
Total Measure of Refund	\$9,000

If Option 1 were chosen and these two vendors were the only ones for which tax was overpaid, the total measure of refund would have been \$7,000, which is the sum of the Vendor D and Vendor X amounts taxed in error across all years.

Suppose the taxpayer also overpaid tax on its only purchase from Vendor R in Year 2, which totaled \$2,000. The purchases from Vendor R are represented in the sample population. Since Vendor R was not selected in the sample for Year 2, the measure of refund in Option 2 would still be \$9,000. In other words, the taxpayer may not make a separate refund claim for the purchases from Vendor R, nor may Vendor R claim a refund for the tax they charged in error.

12. PROJECTING SAMPLE RESULTS TO OTHER OPEN YEARS

When an audit is in its final stages, you may have already filed returns for one or more subsequent filing periods. In some cases, you may choose to project the audit findings forward to those additional periods. The auditor will discuss with you whether this may fit your situation.

Benefits of projecting audit results forward include:

- Saving time
- Avoiding another audit for the projected years
- No requirement to file amended returns for those years
- Less accrued interest because the additional tax due for those years will be paid sooner

A field audit may be projected forward as an assessment or refund, if all parties agree to the computations.

Whether an audit can be projected forward depends on the facts and circumstances of each case. Projecting an audit forward may not be appropriate if there were:

- Changes in the taxpayer's business operations
- Changes in the method of or person responsible for reporting taxes
- Tax law changes affecting the taxpayer
- Unagreed issues in the audit

However, these factors do not automatically preclude a projection forward.

In most cases only one audit cycle (up to 4 years) of projection forward will be considered.

13. QUESTIONS ABOUT THE SAMPLE

The department's goal is to ensure you understand the audit process, timeline and preliminary findings as the audit progresses. If at any point you have questions about the sample or the audit process in general, please ask the auditor, CAS, or auditor's supervisor.

Applicable Laws and Rules

This document provides statements or interpretations of the following laws and regulations enacted as of May 13, 2022: ch. 77, [Wis. Stats.](#), and ch. Tax 11 [Wis. Admin. Code](#). Laws enacted and in effect after this date, new administrative rules, and court decisions may change the interpretations in this document. Guidance issued prior to this date that is contrary to the information in this document is superseded by this document, according to sec. 73.16(2)(a), Wis. Stats.

APPENDIX A: DATA FILE STANDARDS – SALES RECORDS

Requested File Formats: .xlsx or .csv			
Field	Field Name	Description	Format
1	Customer Name		Alpha/Numeric
2	Customer Number		Alpha/Numeric
3	Transaction Number	Invoice or other number required to identify the source document.	Alpha/Numeric
4	Transaction Line Item	Transaction Number.	Alpha/Numeric
5	Transaction Date	Year, month, and day of transaction.	Date
6	Invoice Amount	Includes taxable and exempt amounts.	Numeric
7	Line Item Amount	Includes taxable and exempt amounts.	Numeric
8	Invoice Exempt Amount	Exempt amount per transaction line item.	Numeric
9	Invoice Tax Amount	Sum of all jurisdictional tax amounts.	Numeric
10	Invoice Freight Amount		Numeric
11	Tax Rate	Includes state, county, stadium, and other jurisdictional tax rates.	Numeric
12	Tax Code	Reasons for exemption.	Alpha/Numeric
13	Product description of item sold	Invoice description of item sold or purchased.	Alpha/Numeric
14	Product Code		Alpha/Numeric
15	Ship to Customer Name	Required for drop shipments.	Alpha/Numeric
16	Ship to Customer Number	Required for drop shipments.	Alpha/Numeric
17	Ship to Address 1	Address line 1.	Alpha/Numeric
18	Ship to Address 2	Address line 2.	Alpha/Numeric
19	Ship to City	Name of city.	Alpha
20	Ship to State	State abbreviation (2 character).	Alpha
21	Ship to Zip Code	Zip code (9 character).	Alpha/Numeric
22	Bill to Name		Alpha/Numeric
23	GEO/Juris Codes		Alpha/Numeric
24	Job Number		Alpha/Numeric
25	Job Description		Alpha/Numeric

APPENDIX B: DATA FILE STANDARDS – PURCHASE RECORDS

Requested File Formats: .xlsx or .csv			
Field	Field Name	Description	Format
1	Vendor Name		Alpha/Numeric
2	Vendor Number		Alpha/Numeric
3	Document Number	Number leading back to source document.	Alpha/Numeric
4	Document Date	Batch date or postdate.	Date
5	Document Type	Includes vendor invoice and vendor credit memo.	Alpha
6	Account Number		Alpha/Numeric
7	Account Description		Alpha
8	Distribution Amount	Amount charged to account.	Numeric
9	Department or Cost Center		Alpha/Numeric
10	Other Accounting Information	Includes location, plant, division, etc.	Alpha
11	Transaction Number	Invoice or other number required to identify the transaction source document.	Alpha/Numeric
12	Transaction Line Item	Individual line number to be used in conjunction with the Transaction Number.	Alpha/Numeric
13	Transaction Date	Year, month, and day of transaction.	Date
14	Invoice Amount	Includes taxable and exempt amounts.	Numeric
15	Amount Field Sign	If amount field is not signed.	Alpha
16	Line Item Amount	Includes taxable and exempt amounts.	Numeric
17	Purchase Order Number		Alpha/Numeric
18	Invoice Tax Amount	Sum of all jurisdictional tax amounts paid to vendor.	Numeric
19	Tax Accrued	Tax self-assessed.	Numeric
20	Tax Code		Alpha/Numeric
21	Product description of item purchased	Invoice description of item purchased.	Alpha/Numeric