Purpose:

To provide information about the Illinois Department of Revenue's audits of electronic records and our computer assisted auditing techniques.

Objectives:

— To inform you of the types of information and data that we will need during an audit

— To explain how and why the use of computerized records may impact the audit process

— To provide the guidelines that our auditor will follow for electronic records and computer assisted auditing functions

General Information:

The primary objective of a tax audit is for both parties to ensure compliance with the tax laws and to collect and pay the correct amount of tax.

This objective does not change because all or part of your records are being reviewed in an electronic format or because the audit involves electronic data transactions (EDI) rather than paper source documents.

During an audit, we interact with representatives of your business. For a traditional audit, this normally includes individuals representing the taxation, accounting, and legal areas of your business. In the audit of electronic records, the auditor, through a primary taxpayer contact, may also interact with representatives of other areas, such as, internal audit, data processing, management information systems, and records management.

What types of information will the auditor need during the audit process?

The auditor will need information that answers the following questions:

- Are electronic records available?
- What is the record retention policy of the business?
- What controls are in place to safeguard the records?
- Are detail and summary records available for the audit period?
- Are the electronic records reliable?
- What internal controls are in place to support the tax accrual system?
- Do the internal controls produce an acceptable level of assurance that the records are reliable?
- How are tax accrual system changes developed and implemented?
- Do undocumented system changes exist?
- Where do the numbers on the tax return come from?
- What are the origins of the taxpayer's electronic records?
- Is there an audit trail?
- Is transaction level information available, in adequate detail, to sample and determine if the tax treatment is correct? (Summary reports, in the early stage of a tax audit, may not be sufficient to satisfy the auditor's need to know.)
- When, where, and how will the electronic records be analyzed?
- Can the information be analyzed using the taxpayer's system resources?
- Does the department have adequate hardware and software resources available to conduct an audit of electronic records?
- Are third-party resources available?
- What sampling techniques and methods can be used in place of a detailed review of all records for the audit period?

Are the tests, procedures, standards, and techniques the same as those used for physical-records audits?

In general, yes. Since the objectives of the audits are the same, it follows that we will apply similar, if not identical, measures to both.

What differences exist?

For electronic and computer-assisted audits, we will incorporate your data into electronic, computer-readable form. The sampling methods will be enhanced through computer-assisted audit analysis of your electronic data.

We may study and evaluate the existing internal controls for the accrual and reporting of tax liabilities. This determines to what extent we can rely on internal controls to impact the audit's objectives, techniques, procedures and tests.

Why is it important to evaluate existing internal controls?

Without good internal control, any document – physical or electronic – is subject to alteration, forgery and falsification. In the review of electronic records, we give more weight to the internal controls installed to support the tax accrual and reporting systems. This evaluation does not indicate any change in the degree of trust between the auditor and the taxpayer.

How will the department evaluate the reliability of an electronic record keeping system?

Certain basic internal control functions should be contained within an electronic record keeping system. The following list is not all-inclusive, but confirming if these functions exist or not determines how much we will rely on the records and tax accrual and reporting systems.

- System threat and risk analysis
- Limited access to electronic record systems

- Access authorization or security codes
- Unalterable date-stamping of transactions and transaction files
- System and data access logs
- Data alteration logs and preservation of original unaltered data record
- Rejected transaction or transmission procedures and logs
- Regular review of access alteration and rejection logs or trails
- Archival retention of electronic records for the statutory period
- Preservation and security of data integrity of archival records for the statutory period
- Storage of historical transaction summary and control total reports, and related information
- Third-party documentation that supports electronic transactions, (including but not limited to audit reports, bills of lading, exemption certificates, acknowledgments of receipt, payment vouchers, contracts, trading-partner agreements)
- Existence of a formal security policy or applicable procedures manual

Will the department analyze the systems integrity of electronic records including EDI transmissions?

In an audit of electronic records that includes electronic data interchange (EDI) transactions, we may analyze your EDI and business transaction systems. This allows us to verify that the system components impacting the proper application of tax are valid. Our analysis will tell us

- how and what data flows through the system;
- what files are used;
- what reports are generated;
- what manual processes relate to the data flows; and
- what internal controls are present.

Most electronic accounting systems are not completely EDI, and will include some paper-based transactions. Changes in business operations,

especially acquisitions and mergers of entities already engaged in EDI, and changes in accounting and computer systems, could affect existing EDI general controls. It is important to keep system documentation up to date.

Will any other systems be analyzed?

We may examine, through a system integrity audit (SIA), the system and subsystem that implements the EDI process.

What is the purpose of an SIA?

The purpose of an SIA is to help us attain an acceptable level of confidence in the EDI system. For any tax audit, both the taxpayer and the department need to agree that the data examined is an accurate and complete record of the transactions that occurred. Many of the document controls, which provided a desired level of confidence for a traditional form of record keeping, may not be available in an EDI environment.

We will, on an audit by audit basis, determine whether to conduct the SIA. The results of an SIA could reduce the overall scope of the tax audit.

What will the department need to know in order to establish confidence in our EDI system?

We will need to know the answers to the following questions:

- Are there policies and procedures in place that govern the system and subsystem processes and implement controls?
- Are the controls subject to manipulation, and if so, to what degree?
- Can individual transactions be traced?
- Are translation software control procedures in place?
- Does the information generated by the system tie to the financial statements, or similar reports?
- Are relevant system audit reports (*e.g.,* internal, third party) available for review?

If, while conducting the SIA, we attain an acceptable level of confidence, we may stop the SIA at that point.

Who conducts and pays for the SIA?

An SIA can be conducted by

- the department,
- you, the taxpayer, or
- a third party.

If we perform the SIA, we will pay for the cost and will provide you with any work products or opinions, that are generated as a result of the SIA.

If we agree, you or a third party may conduct the SIA. Generally, you will pay for the cost of an SIA performed by you or a third party.

What methods are used to verify the effectiveness of internal controls and EDI transactions?

Various methods, including computer-assisted audit techniques or traditional manual techniques, may be used to verify the effectiveness of internal controls and EDI transactions. These methods may include:

- Transaction recording procedures
- Individual and batch transaction-level testing
- Random transactions testing
- Transaction flow analysis
- Pre and post translator testing

What records and data about determining correct tax liability can I expect the department to request?

We will request only records and data that are relevant to the audit.

We will ensure the transaction data is material to the audit and is used properly. We will take into account the nature of transactions and the ease with which data can be accessed and analyzed. The scope of the examination and the extent of detailed review will depend on how confident we are in your system's internal controls.

If

- you do not understand a request, we will explain what type of information we need and why.
- the information is not available in the form requested, you should supply equivalent information.

● the information does not exist, we will discuss alternative sources of information with you.

How does the department ensure the confidentiality of the information that I provide?

We have confidentiality laws that protect the sensitive nature of the information, including electronic records, obtained during an audit. These laws ensure that your confidential information will not be disclosed to the public or to competitors. If we use a third party during an audit, the same confidentiality provisions apply to them.

Before you provide copies of electronic business records, both you and the department should attempt to reach agreement on the following items:

● The format in which the records will be provided

● Security measures to be used to protect the confidentiality of the records

● How the records will be reviewed with respect to hardware and software concerns

● The possibility of limiting access to the records to parties agreed to by you and the department

● How we will return or dispose of your copies of electronic business records at the conclusion of the audit process or related litigation

● The impact existing exchange agreements with other taxing authorities will have on the access granted

What if the department's hardware or software isn't compatible with mine?

In an electronic audit environment, we may find that our hardware or software is not compatible with yours. If so, we will work with you to find a solution.

If you maintain electronic records, you must provide access to them and have the ability to provide data in ASCII, EBCDIC, or flat file formats. We may download information for examination and complete the audit work off-site.

What will be discussed at the opening conference of a computer assisted audit (CAA)?

In most cases, the opening conference is held to discuss

● the audit plan,

● computer system review,

● agreements to be reached, and

● an overview of sampling guidelines and projection techniques.

Audit Plan

The CAA plan will include discussions of how we plan to address sales and use tax populations.

● For **sales tax analysis**, the department will attempt to split the population between taxable and nontaxable sales.

  - For taxable sales, if feasible, we will calculate tax amounts versus amounts in file or amounts in file versus amounts posted on our system. Based on the results, amounts will either be accepted as correct or a sample will be done.

  - For nontaxable sales, we will either perform a detail of exemption information or a sampleof individual customers or transactions.

● For **use tax analysis**, we will focus on purchases. We will split the population into areas of interest— Accounts, Cost Centers, Locations, Divisions, etc. Once agreement is reached in this area, we will stratify the sample population and draw a sample.

Computer System Review

The review of your computer system will involve discussing

● the software package in use for Accounts Payable or General Ledger depending on which file the CAA will be utilizing and whether or not fixed assets are in a separate system;

● issues related to the data files;

● areas related to electronic commerce including

  - Electronic Data Interchange (EDI)

  - Procurement Cards,

  - Evaluated Receipts Settlement,

  - Electronic Funds Transfer (EFT), and

  - imaging; and

● Illinois specific tax related items including Manufacturer's Purchase Credit (MPC).

Note: Other system-related and tax-related items may also be discussed.

Agreements

We will communicate with you throughout the CAA process on significant issues that occur.

Our goal is to reach agreements on

● strata breaks,

● sample sizes,

● accounts,

● cost centers,

● locations,

● divisions of interest,

● handling of credits, and

● missing invoice handling.

We will provide you with the CAA reports that are given to our tax auditor.

Sampling Guidelines

Since it is not possible or practical to examine all transactions, sampling is often used in a tax audit.

Both parties should

● review the method of sampling, population definitions, stratification and sample size;

● discuss projection methods and bases;

● agree that nonrecurring, extraordinary items should not be projected; and

● agree that credits or overpayments where the taxpayer has born the burden should be projected as well as liability items. This does not include transactions where tax was paid to an Illinois registered vendor in error. Credits include, but are not limited to,

  - credit memo transactions,

  - tax accrued in error,

  - tax paid to reciprocal taxing authority, and

  - adjustment transactions.

Projection Techniques

Once we have completed a review of the transactions selected by the random sample, any errors found in a strata are projected against the total items for that strata. The projection method used to calculate the tax liability or refund due is based on the optimum sample evaluation method.

The optimum sample evaluation method is the one with the smallest sampling error. We use the following four mathematical methods of sample evaluation in a CAA:

- Mean estimator,
- Difference estimator,
- Combined ratio estimator
- Combined regression estimator

Our policy is to propose the tax liability or deficiency based on the optimum estimators' calculated point estimate.

The descriptions that follow will step you through the mathematical calculations used to reach the point estimate for each of these methods.

Mean estimator

1 Sum the individual audited amounts per strata for the sample transactions and divide by the total number of transactions reviewed in the strata sample.

2 Multiply the resulting average audited amount per transaction by the total number of transactions in a strata population to determine an estimated total audited value per strata.

3 Subtract the estimated audited strata value from the reported strata population to determine a tax deficiency or overpayment per strata.

4 Calculate the total tax deficiency or overpayment for all strata by summing the computed tax deficiencies or overpayments of each stratum.

Difference estimator

1 Sum the individual tax differences per strata for the sample transactions and divide by the total number of transactions reviewed in the strata sample.

2 Multiply the resulting average difference per transaction by the total number of transactions in a strata population to determine a tax deficiency or overpayment per strata.

3 Calculate the total tax deficiency or overpayment for all strata by summing the computed tax deficiencies or overpayments of each stratum.

Combined ratio estimator

1 Sum the individual tax differences per strata for sample transactions and divide by sample size to determine an average adjustment per sample item.

2 Multiply this average adjustment per sample item by the strata population count to calculate the sample adjustment value per strata.

3 Multiply the strata population count by the average of the reported strata sample values to compute the estimated reported value.

4 Divide the sum of the sample adjustment values per strata by the sum of the estimated reported value per strata to compute the combined adjustment ratio.

5 Multiply the combined adjustment ratio by the total reported value of all strata excluding any detail population for computing the proposed adjustment of the sample strata.

6 Calculate the total tax deficiency or overpayment for all strata by summing the proposed adjustment of the sample strata and the adjustments per detail strata.

Combined regression estimator

This method uses the best linear relationship between the adjusted and reported values of sample items to compute the point estimate.

1 Sum the individual tax differences per strata for sample transactions and divide by the sample size to determine an average adjustment per sample item.

2 Multiply this average adjustment per sample item by the strata population count to calculate adjustment per strata.

3 Multiply the regression coefficient (the calculation of this fraction is defined after Step 4) by the difference between strata reported value and estimated strata reported value. Add the result to the adjustment per strata in order to determine the strata tax deficiency or overpayment.

4 The total tax deficiency or overpayment for all strata is calculated using a multi-strata sampling formula which takes into consideration the computed tax deficiencies or overpayments of each strata.

The regression coefficient numerator is the summation of adjusted values multiplied by reported values subtracted from sample size multiplied by average adjustment per sample item multiplied by average reported value.

The denominator is the summation of reported values squared less sample size multiplied by average reported values squared.

Questions?

If you have questions or need more information, please call or write us. Our telephone numbers and address are listed at the end of this publication.

For information or forms

Call us at **1 800 732-8866** or **217 782-3336**.
Call our TDD (telecommunications device for the deaf) at **1 800 544-5304**.
Write us at Illinois Department of Revenue, P.O. Box 19044, Springfield, IL 62794-9044.
Visit our Web site at **tax.illinois.gov**.
Call our 24-hour Forms Order Line at **1 800 356-6302**.

Printed by authority of the State of Illinois (16,655 - 12/98 - 59876)

Page 4 of 4

PUB-107 (N-12/98)