

Handling of positive and negative transactions in a statistical sampling audit

Objective

In general, the use of statistical sampling does not change the standard audit procedures used by the Audit Division when reviewing taxpayer records. Taxpayer's electronic data frequently include records that contain both positive and negative amounts. It is important that the auditor uses a consistent procedure for determining the taxability of these records. The purpose of this section is to define the procedure auditors should follow when auditing these positive and negative records.

Overview

The theory applied in performing a statistical sampling audit is basically the same as performing a detailed audit. Every transaction reviewed in a statistical sampling audit should be treated as if it were part of a detailed audit. Since all invoices in the population are represented by the sample, the decision regarding the taxability of the invoice should stand alone, that is, it should not be dependent on actually examining another invoice in the population or sample. **While this statement is true most of the time, the review of certain types of credit transactions selected for review within the sample may need to be researched prior to making a tax determination (detailed discussion below).**

When an auditor reviews a negative transaction representing a merchandise return, while performing a statistical sampling audit, he/she must first decide how the associated positive transaction would have been treated, and do the exact opposite when dealing with the negative transaction. It is important to note that the positive transaction (original purchase) must have occurred during the period under audit and had an opportunity to actually be selected. If the original purchase did not occur during the period under audit and the credit for the purchase is selected in the sample, the auditor will treat this item as having no tax implication (non-error item). If a purchase of merchandise is made at the end of an audit period and it can be shown by the taxpayer that the merchandise was returned and actually not credited until sometime after the audit period, the department will treat the original purchase within the audit period as a non-error item. This is consistent with how the item would be handled in a detailed audit.

Assuming both the associated positive and negative items occur during the audit period, the following treatment of the sampled items would hold true:

If the positive transaction had resulted in crediting the taxpayer for an overpayment of tax, the entry for the negative transaction must assess the same amount of tax that would have been credited in the positive transaction.

If, upon audit, the negative item is one for which the auditor would determine an additional tax if it were a positive amount, a tax credit should be allowed.

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Assumptions

For purchases and returns

- The audit is a use tax audit.
- The sampling unit is a distribution to an account.
- The taxpayer has the capability to self-accrue tax.
- A positive amount is a purchase made by the taxpayer.
- A negative amount represents a return of merchandise to the vendor.
- Both the purchase and return occur within the audit period.
- On purchases, the taxpayer either accrued or paid the full amount of tax or did not accrue or pay any tax.
- On returns, the taxpayer either recovered the full amount of tax originally paid or did not recover any tax.

Positive invoice amounts - purchases

When auditing a purchase, the auditor must determine if the purchase is taxable, and if the taxpayer paid or accrued the correct tax on the purchase.

The decision matrix below identifies the auditing outcomes based on the answers to these questions.

Outcome #	Scenario	Transaction taxable	Transaction nontaxable
1	Taxpayer paid tax, no tax accrued	No change in tax	Negative change in tax equal to 1 X tax amount
2	Taxpayer accrued tax, did not pay tax	No change in tax	Negative change in tax equal to 1 X tax amount
3	Taxpayer paid tax and also accrued tax	Negative change in tax equal to 1 X tax amount	Negative change in tax equal to 2 X tax amount
4	Taxpayer did not pay tax, did not accrue tax	Positive change in tax equal to 1 X tax amount	No change in tax

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<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
<i>1</i>	<i>Taxpayer paid tax, no tax accrued</i>	<i>No change in tax</i>	<i>Negative change in tax equal to 1 X tax amount</i>

Illustrative example for outcome #1:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$0
On audit, this transaction is determined to have been properly handled. No adjustment needed.	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$0
On audit, it is determined that tax should not have been paid on this transaction. The auditor would give an \$8.00 credit for the tax that was paid.	

<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
<i>2</i>	<i>Taxpayer accrued tax, did not pay tax</i>	<i>No change in tax</i>	<i>Negative change in tax equal to 1 X tax amount</i>

Illustrative example for outcome #2:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$0
Total invoice:	\$100.00
Tax accrued:	\$8.00
On audit, this transaction is determined to have been properly handled. No adjustment needed.	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$0
Total invoice:	\$100.00
Tax accrued:	\$8.00
On audit, it is determined that tax should not have been accrued on this transaction. The auditor would give an \$8.00 credit for the tax that was accrued.	

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<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
3	<i>Taxpayer paid tax, and also accrued tax</i>	<i>Negative change in tax equal to 1 X tax amount</i>	<i>Negative change in tax equal to 2 X tax amount</i>

Illustrative example for outcome #3:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
<p>On audit, it is determined that tax was properly paid to the supplier but then improperly accrued. The auditor would give an \$8.00 credit for the tax that was accrued.</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
<p>On audit, it is determined that tax should not have been paid to the law firm nor accrued by the taxpayer on this transaction. The auditor would give an \$8.00 credit for the tax that was paid on the invoice and an additional \$8.00 credit for the tax that was improperly accrued.</p>	

<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
4	<i>Taxpayer did not pay tax, did not accrue tax</i>	<i>Positive change in tax equal to 1 X tax amount</i>	<i>No change in tax</i>

Illustrative example for outcome #4:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$0
Total invoice:	\$100.00
Tax accrued:	\$0
<p>On audit, this transaction is determined to have been improperly handled. The auditor would assess tax in the amount of \$8.00</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$0
Total invoice:	\$100.00
Tax accrued:	\$0
<p>On audit, this transaction is determined to have been properly handled. No adjustment needed.</p>	

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Negative invoice amounts - returns

When auditing a returned item, the auditor must determine if:

1. the original purchase was made within the audit period
2. the original purchase is taxable
3. the taxpayer recovered the tax on the purchase or reversed the accrual

The decision matrix below identifies the auditing outcomes based on the answers to these questions.

Outcome #	Scenario	Transaction taxable	Transaction nontaxable
1	Taxpayer recovered tax, no tax originally accrued	No change in tax	Positive change in tax equal to 1 X tax amount
2	Taxpayer did not recover tax, tax originally accrued now reversed	No change in tax	Positive change in tax equal to 1 X tax amount
3	Taxpayer did not recover tax, tax originally accrued never reversed	Negative change in tax equal to 1 X tax amount	No change in tax
4	Taxpayer recovered tax and tax originally accrued now reversed	Positive change in tax equal to 1 X tax amount	Positive change in tax equal to 2 X tax amount
5	Taxpayer recovered tax, tax originally accrued never reversed	No change in tax	Positive change in tax equal to 1 X tax amount
6	Taxpayer did not recover tax, no tax originally accrued	Negative change in tax equal to 1 X tax amount	No change in tax

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For the following examples, remember that the negative transaction representing a return of merchandise or credit for services rendered needs to be handled in such a way that it would offset how the original purchase would have been handled upon audit. The explanations below will discuss how the positive transaction was handled to assist in understanding how the negative transaction needs to be handled.

<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
<i>1</i>	<i>Taxpayer recovered tax from supplier, no tax originally accrued</i>	<i>No change in tax</i>	<i>Positive change in tax equal to 1 X tax amount</i>

Illustrative example for outcome #1:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$0
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$8.00)
Total credit:	(\$108.00)
Tax accrued:	(\$0)
<p>On audit, this transaction is determined to have been improperly handled. The tax amount of \$8.00 on the original purchase has been properly credited. No adjustment needed.</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$0
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$8.00)
Total credit:	(\$108.00)
Tax accrued:	(\$0)
<p>On audit, it is determined that tax should not have been paid on the original transaction. The auditor would have given an \$8.00 credit for the tax that was paid on the original purchase. Since the invoice is being credited back to the taxpayer with the tax, the auditor must now assess tax in the amount of \$8.00 to balance the tax credit that he/she would have given for the original purchase.</p>	

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<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
2	<i>Taxpayer did not recover tax from supplier, tax originally accrued now reversed</i>	<i>No change in tax</i>	<i>Positive change in tax equal to 1 X tax amount</i>

Illustrative example for outcome #2:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$0
Total invoice:	\$100.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$0)
Total credit:	(\$100.00)
Tax accrued:	(\$8.00)
<p>On audit, this transaction is determined to have been improperly handled. The tax accrued of \$8.00 on the original purchase has been properly credited reversing the original accrual. No adjustment needed.</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$0
Total invoice:	\$100.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$0)
Total credit:	(\$100.00)
Tax accrued:	(\$8.00)
<p>On audit, it is determined that tax should not have been accrued on the original transaction. The auditor would have given an \$8.00 credit for the tax that was accrued on the original purchase. Since the invoice is being credited back to the taxpayer, the auditor must now assess tax in the amount of \$8.00 to balance the tax credit that he/she would have given for the original purchase.</p>	

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<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
3	<i>Taxpayer did not recover tax from supplier, tax originally accrued now reversed</i>	<i>Negative change in tax equal to 1 X tax amount</i>	<i>No change in tax</i>

Illustrative example for outcome #3:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$0)
Total credit:	(\$100.00)
Tax accrued:	(\$0)
<p>On audit, it is determined that tax was properly paid to the supplier but then improperly accrued. The auditor would have given an \$8.00 credit for the tax that was accrued on the original purchase. Because the supplier in this instance only issued a credit for the actual merchandise without the tax, the auditor must now credit \$8.00 for the tax that was originally paid but never credited.</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$0)
Total credit:	(\$100.00)
Tax accrued:	(\$0)
<p>On audit, it is determined that tax should not have been paid to the law firm nor accrued by the taxpayer on this transaction. The auditor would give an \$8.00 credit for the tax that was paid on the invoice and an additional \$8.00 credit for the tax that was improperly accrued. Since the invoice is being credited back to the taxpayer, the auditor has no adjustment to be made for the credit invoice. The credit invoice did not contain a tax credit and the taxpayer made no adjustment to the tax accrual account maintaining the balance that would have been created by the auditor when he/she would have given the original \$16.00 credit.</p>	

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<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
4	<i>Taxpayer recovered tax from supplier and tax originally accrued now reversed</i>	<i>Positive change in tax equal to 1 X tax amount</i>	<i>Positive change in tax equal to 2 X tax amount</i>

Illustrative example for outcome #4:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$8.00)
Total credit:	-\$108.00)
Tax accrued:	(\$8.00)
<p>On audit, it is determined that tax was properly paid to the supplier, then improperly accrued. The auditor would have given an \$8.00 credit for the tax that was accrued on the original purchase. Since the taxpayer properly received the credit for the tax from the supplier and properly reversed the original entry in the tax accrual account, the auditor must assess \$8.00 in tax to offset the original \$8.00 in tax that was credited when the original purchase invoice would have been examined.</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$8.00)
Total credit:	(\$108.00)
Tax accrued:	(\$8.00)
<p>On audit, it is determined that tax should not have been paid to the law firm nor accrued by the taxpayer on this transaction. The auditor would give an \$8.00 credit for the tax that was paid on the invoice and an additional \$8.00 credit for the tax that was improperly accrued. Since the credit invoice reflects an \$8.00 tax credit and the accrual account is being credited for the \$8.00 in tax erroneously accrued, the auditor must now assess \$16.00 in tax to offset the original \$16.00 in tax credits he/she allowed when the original purchase was examined.</p>	

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<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
5	<i>Taxpayer recovered tax from supplier, tax originally accrued never reversed</i>	<i>No change in tax</i>	<i>Positive change in tax equal to 1 X tax amount</i>

Illustrative example for outcome #5:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$8.00)
Total credit:	(\$108.00)
Tax accrued:	(\$0)
<p>On audit, it is determined that tax was properly paid to the supplier but then improperly accrued. The auditor would have given an \$8.00 credit for the tax that was accrued on the original purchase. Since the taxpayer properly received the credit for the tax from the supplier and then failed to reverse the original entry in the tax accrual account, the auditor needs to make no adjustment since the original credit of \$8.00 allowed by the auditor had the effect of bringing the accrual account back into balance.</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$8.00
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$8.00)
Total credit:	(\$108.00)
Tax accrued:	(\$0)
<p>On audit, it is determined that tax should not have been paid to the law firm nor accrued by the taxpayer on this transaction. The auditor would give an \$8.00 credit for the tax that was paid on the invoice and an additional \$8.00 credit for the tax that was improperly accrued. Since the credit invoice reflects an \$8.00 tax credit and the accrual account is not being adjusted for the \$8.00 in tax erroneously accrued, the auditor must now assess only the \$8.00 in tax representing the tax charged by the supplier to offset the original \$8.00 in tax credits he/she allowed when the original purchase was examined. The auditor's tax credit of \$8.00 originally allowed on the purchase transaction had the effect of bringing the accrual account back into balance.</p>	

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<i>Outcome #</i>	<i>Scenario</i>	<i>Transaction taxable</i>	<i>Transaction nontaxable</i>
6	<i>Taxpayer did not recover tax from supplier, no tax originally accrued</i>	<i>Negative change in tax equal to 1 X tax amount</i>	<i>No change in tax</i>

Illustrative example for outcome #6:

Taxable transaction:	
Item purchased:	Office supplies
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$0
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$0)
Total credit:	(\$100.00)
Tax accrued:	(\$0)
<p>On audit, it is determined that tax was properly paid to the supplier with no tax being correctly accrued. The auditor would have made no adjustment on the original purchase since tax was properly paid to the supplier. Since the taxpayer did not properly received the credit for the tax from the supplier on the credit invoice, the auditor will allow a tax credit in the amount of \$8.00.</p>	

Nontaxable transaction:	
Item purchased:	Legal services
Amount of purchase:	\$100.00
Tax rate:	8%
Tax charged:	\$8.00
Total invoice:	\$108.00
Tax accrued:	\$0
Credit invoice:	
Merchandise:	(\$100.00)
Tax:	(\$0)
Total credit:	(\$100.00)
Tax accrued:	(\$0)
<p>On audit, it is determined that tax should not have been paid to the law firm billed on the invoice for this transaction. The auditor would give an \$8.00 credit for the tax that was paid on the invoice. Since the credit invoice does not reflect an \$8.00 tax credit for this credit invoice, the auditor does not need to make any adjustment. The prior \$8.00 credit given by the auditor on the original purchase had the effect of bringing the tax into balance.</p>	

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Journal entries/reclassifications

An auditor may also have to contend with a positive or negative item that did not represent returned merchandise but rather represented a reclassification from one account to another. These can be reclassifications to an account that were included in the population that was sampled as well as accounts that were not included in the population being sampled. If the item went to an account included in the population, there would most likely exist two positive items and one negative item, all with an equal chance to be selected. If the item went to an account that was not included in the population, then there would most likely exist one positive and one negative item with an equal chance to be selected.

Reclassification from one selected account to another selected account

If you have a reclassification from a selected account to another selected account in the population, the item would be handled the way a normal returned item is handled. However, the department handles these types of transactions in a manner that could not possibly skew the results and potentially over-assess the taxpayer. If only one of the positive reclassification entries is chosen as part of the sample, the auditor would tax it if tax were underpaid or give a tax credit if tax were overpaid. If the sample has two selected positive transactions representing the same transaction, and that transaction is an error (underpayment of tax or overpayment of tax), the auditor should choose only the one positive item that represents the re-class entry as the actual error. The remaining positive item representing the original charge to the incorrect account only represents an accounting entry that should have no tax impact. In either of these instances, if the negative item associated with this re-class is selected in the sample, the auditor should ignore the negative transaction.

Reclassification from a selected account to a nonselected account

If you are reclassifying a transaction from a selected account in the population to a nonselected account that is outside the population, the item would be handled the way a normal returned item is handled. However, the department handles these transactions in a manner that could not possibly skew the results by over-assessing the taxpayer. If this type of transaction is selected in the sample and found to be an error, it is our procedure to treat this item (either positive or negative) as a non-error transaction. The transaction now may be selected for review outside of the statistical sample, if the auditor chooses to review any non-selected accounts either by a separate statistical sample or by a detailed review.

If the population of transactions contains many reclassification types of entries, the auditor should discuss possible alternatives with a member of the EDP Field Audit Services Section to ensure that the audit results are not skewed.

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Tax-Only invoice

When an auditor encounters a tax-only invoice in the sample, meaning that a supplier did not originally bill tax when the purchase was made, the auditor must first determine if the original purchase was made during the period under audit. If that was the case, then the auditor must credit the taxpayer for the full amount of the tax being billed on the invoice even though this original purchase invoice was not selected as part of the sample. That's because the auditor would have taxed the original invoice had he/she seen it, thus creating a situation in which the taxpayer would have been taxed twice for the merchandise. If the original purchase was made prior to the beginning of the audit period, then there is no tax implication for the tax-only invoice since the auditor would have no opportunity to view the original purchase transaction. If the original purchase was made during the audit period but the tax was billed separately after the audit period, the auditor treats the original purchase as a non-error item. This is consistent with how this transaction would be handled in a detailed audit.

If the auditor becomes aware that a tax-only invoice exists during the audit period, but was not selected as part of the sample for a purchase transaction that appears in the sample, tax still needs to be assessed on the original purchase transaction. The specific tax-only invoice in question had an opportunity to be selected as part of the sample, but was not, while another tax-only invoice may have been selected as part of the sample with its corresponding purchase invoice not selected. This is important for consistency in the handling of these types of errors. If it were possible to match up all transactions that fall into this category and upon review not tax the original purchase or give tax credit for the tax-only invoice, this would be deemed an acceptable way to handle these types of transactions. You must avoid using a combination of different methods when all such transactions cannot be positively identified. Consistency in the handling of each specific type of transaction is essential in obtaining accurate results. If an auditor is unsure how to handle specific types of transactions, he/she should contact the EDP Audit Section for clarification.

Installment/progress billings

When reviewing invoices that represent installment or progress billings, the auditor should refer to the original contract related to those billings. This contract should specify how taxes will be handled. The auditor should not tax any invoices that fall into this category if the contract specifically outlines that taxes will be billed either up-front or at the end of the contract. The auditor should confirm that taxes are actually being billed according to the contract.