

STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE



INDIANA GOVERNMENT CENTER NORTH
100 NORTH SENATE AVENUE N1058(B)
INDIANAPOLIS, IN 46204
PHONE (317) 232-3777
FAX (317) 232-8779

TO: Assessing Officials
FROM: Barry Wood, Director of Assessment *JBW*
RE: 2011 Ratio Study Review Process / Annual Adjustment Guidance
DATE: January 11, 2011

The purpose of this memorandum is to provide guidance to assessing officials in the ratio study review process by the Department of Local Government Finance ("Department") for 2011 (pay 2012). **First, although the General Reassessment of all property is currently being conducted statewide, the Annual Adjustment process and subsequent ratio study is to be completed for the March 1, 2011 payable 2012 assessment date. IC 6-1.1-4-4.5.**

The revised Annual Adjustment Rule, 50 IAC 27, became effective May 8, 2010, and is in effect for the March 1, 2011 assessment date. (See www.in.gov/legislative/iac/T00500/A00270.PDF). As noted previously, the new rule incorporates by reference the 2007 International Association of Assessing Officers ("IAAO") Standard on Ratio Studies. (See www.in.gov/dlgf/files/100507 - Wood Memo - Annual Adjustment Rule.pdf). It also requires the complete physical re-inspection of real property at least once every five (5) years and the establishment of a record-keeping system. 50 IAC 27-3-1(e).

In January 2010, the Department issued guidance on changes for the 2011 pay 2012 ratio study process. (See www.in.gov/dlgf/files/100112 - Schwab Memo - 2011 Ratio Study Changes.pdf). **However, the implementation of those changes is delayed until a future assessment date, and will not be in effect for the March 1, 2011 assessment date.** Hence, the ratio study process for the March 1, 2011 assessment date is the same as in 2010.

It is still the responsibility of the County Assessor to do the annual adjustment work, which includes developing and applying the "trending" factor(s) for all classes of property and all neighborhoods. It is also highly recommended that to help identify any potential problems, the County Assessor conduct its own internal ratio study before submitting the assessed value information to the Department. **The Department requests that the County Assessor continue to submit a ratio study in an electronic format after the annual assessment process is completed. Although there is no statutory date for the submission of the county's ratio study, to ensure on-time billing for 2011 pay 2012, it is highly recommended the ratio study be submitted by May 2, 2011. Per IC 6-1.1-5-14, the County Assessor must deliver the real estate book (i.e., roll 2011 pay 2012 gross assessed values) to the County Auditor by July 1, 2011.**

As in prior years, a county's ratio study will not be reviewed until all data is compliant, particularly the Sales Disclosure Data File (50 IAC 27-9-1).

Workbook File Format 2011

Comparable to 2010, each county must submit a workbook to the Department for review. The workbook should list the following data for each parcel of real property:

1. State-assigned Parcel Number
2. Township
3. Tax District
4. Neighborhood
5. Property Class
6. Prior Year Land AV
7. Prior Year Improvements AV
8. Prior Year Total AV
9. Current Land AV
10. Current Year Improvements AV
11. Current Year Total AV
12. Proposed adjustment (“trending”) factor (2 columns – one for land, one for improvements)

An example workbook in the correct format can be found on the Department’s website at http://www.in.gov/dlgf/files/Sample_Workbook.xls.

As stated in last year’s guidance, for counties with fewer than 65,000 parcels, **only submission as a 2007-compatible MS Excel spreadsheet is acceptable (no text files will be accepted)**. (See [www.in.gov/dlgf/files/100111 - Wood Memo - 2010 Ratio Study Review Process and Annual Adjustment Guidance.pdf](http://www.in.gov/dlgf/files/100111_-_Wood_Memo_-_2010_Ratio_Study_Review_Process_and_Annual_Adjustment_Guidance.pdf).) All other submission formats will not be analyzed. Due to size restrictions in MS Excel, counties with more than 65,000 parcels may submit their workbook in an MS Access 2007 compatible database.

- All information in the workbook must be submitted on one tab of a 2007 MS Excel-compatible spreadsheet. In particular, it is not acceptable to submit one tab per township, or submit half the parcels in one tab and half in another.
- The fields should be in the order listed above. Specifically, the first column should contain the state-assigned parcel number, the second column the township number, and so on.
- The first row of each column should be the column’s heading.
- There should be no white space between the heading and the first entry on any of the columns, or between any of the columns.
- **The parcel’s Tax District must be included in the workbook.** This will facilitate Department analysis of data at the tax district level.
- The proposed adjustment or “trending” factor for each parcel must also be included in the workbook. Including the trending factor will assist the Department in determining the percent change attributable to the annual adjustment process. It will also ensure that the Department can

fully reconstruct a given assessment if need be. If no trending factor was applied for a parcel (for example, because the income approach was used to value that parcel), then this should be noted in the workbook.

Additional Annual Adjustment (“Trending”) Guidance

TRENDING MUST BE SIMPLIFIED

- **Assessments only need to be changed when there is a clear indication based on market evidence that valuations no longer meet assessment level and uniformity standards, or when there are significant physical changes to a property.**
- **The county assessor shall use sales of properties occurring during a time period that is as short as possible and, ideally no more than fourteen (14) months before the March 1, 2011 assessment and valuation date.** A longer time period may be required to produce a representative sample for a property class within the county.

ASSESSMENT DATE AND VALUATION DATE

- To develop an adequate sample size, the sales used in ratio studies may span a period as long as five (5) years provided economic shifts are taken into account, property characteristics are as they were at the time of the sale, and sales prices have been adjusted for time as necessary.
- The valuation date and assessment date is March 1, 2011. Sales occurring before that date shall be time adjusted if appropriate, in accordance with the IAAO Standard. The time adjusted sale price shall become the basis for all ensuing analysis undertaken.

SALES SCREENING AND VERIFICATION

- **Every arm’s length, open-market sale that appears to meet the conditions of a market value transaction shall be included in the ratio study unless one (1) of the following occurs:**
 - (1) data for the sale are incomplete, unverifiable, or suspect.
 - (2) the sale fails to pass one or more specific tests of acceptability as listed in the IAAO *Standard on Ratio Studies*, Appendix A (July 2007).
- All sales are candidates for the ratio study unless “sufficient and compelling information” can be documented to show otherwise.
- When there is more than one (1) confirmed valid sale of the same property during a ratio study period, only the final transaction shall be used in the ratio study.

SAMPLE SIZE

- Neighborhoods must have five (5) or more sales if the sales comparison approach is used to value improvements or land. For greater precision, a larger sample size is needed. Therefore, in accordance with IAAO guidance, **the Department will require that adequate sample sizes will be used.**

- If commercial and industrial improved properties have a limited number of sales (e.g., less than five (5) sales in the strata), the county must use the other approaches to value as outlined in 50 IAC 27-5-9(b) (i.e., Marshall & Swift, income data, MLS data, etc.).
- Property characteristics data must be continually updated in response to changes brought about by new construction, new parcels, remodeling, demolition, and destruction. The most efficient way of doing this involves building permits.
- The basic physical characteristics of each property used in the ratio study must be the same when assessed and when sold.
- Adjustments to sales price must be documented on the sales disclosure forms (e.g., personal property, points paid, etc.). The adjusted price on the sales disclosure form should match the sales price listed on the ratio study for each parcel.

RATIO STUDY STATISTICAL MEASURES

- Ratio study statistics shall be calculated based on the methods and procedures contained in the IAAO *Standard on Ratio Studies* (July 2007). Note that for strata with between 5 and 20 sold parcels in the ratio study, both the PRD and Spearman Rank test will be evaluated in determining whether vertical inequity is present.
- Confidence intervals are a way of capturing the variation in a sample of properties. For example, the median ratio is generally relied upon as the best estimate of the overall level of assessment for a given property stratum. However, the sample median itself is not an exact estimate of the population median, only the assessor's "best guess." The accuracy of this estimate improves when more sales are used. For example, one would have more confidence that the sample median represented the actual level of assessment, if the stratum contained fifty (50) sales rather than five (5) sales. A confidence interval consists of a lower and upper bound for the median ratio and a given level of confidence that the actual median ratio is between those two bounds. In all cases, the level of confidence used by the Department will be 95%
- The goal is to achieve an overall assessment level equal to 100% of market value. However, ensuring uniformity in assessment levels among strata is also important. Therefore, the overall **assessment level of each township and property class must be within five percent (5%) of the overall assessment level of the county.** For example, if the assessment level of the county is 1.03, the assessment levels of the townships must be between 0.98 and 1.08. Note that confidence intervals will be used in making this determination.
- The assessment level of each major property class must be within five percent (5%) of the overall assessment level of the county. For example, if the assessment of the county is 1.03, the assessment level of each major property class must be between 0.98 and 1.08. The six major property classes are: Industrial Vacant (code 300); Industrial Improved (codes 301 – 399); Commercial Vacant (code 400); Commercial Improved (codes 401 – 499); Residential Vacant (codes 500 – 509); and Residential Improved (codes 510 – 599). Note that confidence intervals will be used in making this determination. Properties with class codes less than 300 or greater than 599 will not be considered in making this determination.

MULTIPLE PARCEL SALES

- A multiple-parcel sale is a transaction involving more than one (1) parcel of real property. If the assessor needs to include multiple-parcel sales, he/she should first determine whether the parcels are contiguous and whether the sale comprises a single economic unit or multiple economic units.
- Regardless of whether the parcels are contiguous, any multiple-parcel sale that involves multiple economic units generally should not be used in ratio studies because of the likelihood that these sales include some plottage value or some discount for economies of scale, unless adequate adjustments for these factors can be made to the sale price.

FORECLOSURES

- **When foreclosure-related sales constitute the preponderance of sales in an area or research shows little difference between them and comparable conventional sales, then validated foreclosure-related sales can be used without adjustment.**
- However, for foreclosure-related sales to be used for modeling, valuation, or ratio studies, they must first meet the **market value** test (defined below).
 - The most probable price (in terms of money) that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
 - The buyer and seller are typically motivated;
 - Both parties are well-informed or well advised, and acting in what they consider their best interests;
 - A reasonable time is allowed for exposure on the open market;
 - Payment is made in terms of cash or in terms of financial arrangements comparable thereto;
 - The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. IAAO Guide to Foreclosure-Related Sales and Verification Procedures (August 2009)

SALES CHASING

- **Sales chasing is the practice of adjusting the value on properties that sold without regard to the market analysis performed in setting values for the population.** Sales chasing can occur on an individual basis or systematically.

- On an individual basis, it may occur when individual sales are reviewed with focus on the assessed value to the sales price. In such a situation, the assessor changes characteristics of the property in order for the value to conform with the sales price.
 - Systematic sales chasing may occur if, when creating adjustments for the market, characteristics are over-stratified. The most common over-stratification is with the creation of neighborhoods.
- **A subtle, possibly inadvertent, variety of sales chasing occurs when the recorded property characteristics of sold properties are changed more than unsold properties.** Then the application of a uniform valuation model to all properties results in the recently sold properties being more accurately appraised than the unsold ones.
 - **Local assessors shall avoid the practice of sales chasing.** The Department shall monitor and discourage sales chasing because unless similar unsold parcels are reassessed at the same level as sold parcels, sales chasing causes inequitable treatment of taxpayers by shifting the tax burden to taxpayers who have recently bought property.
 - All ratio studies will be evaluated by the Department using the methods listed in Appendix D of the *IAAO Standard on Ratio Studies* (July 2007). The technique described under D.1: Comparison of Average Value Changes — the Mann-Whitney test — will be the most commonly employed method, although the use of other methods is not precluded
 - When the Mann-Whitney test is used, it will be conducted at the neighborhood level. All neighborhoods with five (5) or more sold parcels will be tested. **At least ninety-five percent (95%) of all tested neighborhoods must pass the Mann-Whitney test for the ratio study to be approved.** For example, a county with one hundred (100) testable neighborhoods must have at least ninety-five (95) of those neighborhoods pass the Mann-Whitney test for the ratio study to be approved.
 - The null hypothesis in all cases will be that the percent change of sold properties in a neighborhood is not greater than the percent change of unsold properties in that neighborhood. This hypothesis must be rejected with at least ninety-five percent (95%) confidence before sales chasing can be said to have occurred. An adjustment for multiple tests will be used to ensure that the total percentage of false positives is not greater than five percent (5%). Parcels that have undergone substantial changes — as reflected by either a change in property class or as reported by the assessor — will not be tested. Such reported changes must be subject to substantiation by comparing the data reported in the eight (8) standard files submitted contemporaneously with the ratio study to the data so reported for the relevant parcels in the prior year. *See also IAAO Standard on Ratio Studies, Standard 10 (July 1999).*
 - Once it is determined that sales chasing probably has occurred and probably is reducing the validity of ratio study statistical measures of level or uniformity, it is necessary for the assessor to redo the ratio study to establish valid measures before any other recommendations, such as reassessment in accordance with IC 6-1.1-4 or equalization action in IC 6-1.1-14, may be made.

CHANGE FOR CHANGE'S SAKE

- According to the *IAAO Standard on Property Tax Policy*, Standard 4.2.2 (August 2004), in the annual adjustment process, the county assessor is required to re-evaluate the factors that affect value each year, express the interactions of those factors mathematically, and use mass appraisal techniques to estimate property values. As a result, although it is necessary to observe and evaluate, **it is not always necessary to change the assessment of each property each year to achieve current market value-in-use.**
- In other words, as stated in the *Statewide Property Tax Equalization Policy Report* conducted by the Indiana Fiscal Policy Institute (October 2005), **assessments only need to be changed when there is a clear indication based on market evidence that valuations no longer meet assessment level and uniformity standards, or when there are significant physical changes.**

Questions on this memo may be directed to Barry Wood, Director of Assessment, at bwood@dlgf.in.gov or 317.232.3762 or David Schwab, Senior Statistician/Application System Analyst, at dschwab@dlgf.in.gov or 317.234.5861.