
STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE



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TO: Assessing Officials
FROM: Barry Wood, Assessment Division Director
RE: 2016 Ratio Study Guidance
DATE: January 4, 2016

The purpose of this memorandum is to provide guidance to assessing officials regarding changes in the Department of Local Government Finance's ("Department") ratio study review process for the 2016 assessment year. This guidance is similar to last year's, but with a few minor changes. Section I describes the 2016 ratio study process in conjunction with the 2016 annual adjustment ("trending") process and the second phase of the cyclical reassessment. Section II details the ratio submission format. This format is described in more detail in the attached 2016 Ratio Study Format document. Section III has been added regarding Summary Tables.

I. 2016 Annual Adjustment

As in prior years, the Department requires each county assessor to have an approved ratio study prior to submitting 2016 certified assessed values to the county auditor. Per IC 6-1.1-5-14, the county assessor must deliver the real estate book (i.e., roll 2016 pay 2017 gross assessed values and balance) to the county auditor by July 1, 2016. Although there is no statutory date for submission of the county's ratio study, **to ensure on-time billing for 2016 pay 2017, it is highly recommended the ratio study be submitted by March 1, 2016.** Additionally, a county's ratio study will not be reviewed until all datasets are compliant, particularly the Sales Disclosure Data File (50 IAC 27-9-1).

Like last year, the Department will forward a copy of the approved sales file to the county that will be used in the review of the ratio study. It is hoped that this will continue to facilitate an efficient review and comparison when sales are questioned.

As part of the annual adjustment process, values in the ratio study are set using local market data, such as the sale price of comparable properties. **If necessary, further adjustment based on local market data ("trending") may be performed to meet ratio study standards. However, the purpose of the 2016 annual adjustment process is to value properties at their market value-in-use, as indicated by compliance with ratio study standards. If this goal is met without trending, no further adjustment is necessary.**

RATIO STUDY SUBMISSION BY COUNTY

It is highly recommended that the county conduct an internal ratio study before submitting its ratio study to the Department. If an internal ratio study is completed, please forward a copy to the Department. A narrative detailing the county's annual adjustment process, including information about the county's cyclical reassessment activity, as well as a "Workbook," should be included with the county's ratio study submission. The "Workbook" should contain data for each parcel of real property (e.g., state-assigned parcel number, prior year land AV, current year land AV, prior year improvement AV, current year improvement AV, proposed adjustment ["trending"] factor [2 columns – one for land, one for improvements], etc.). In order to differentiate parcels that were subject to the cyclical reassessment and the annual adjustment, a separate column should be established indicating whether or not a parcel was part of the **second phase** of the cyclical reassessment (i.e., "yes" or "no"). An example of a sample "Workbook," including the additional column, can be found at http://www.in.gov/dlgf/files/Sample_Workbook.xls. **Ratio studies will not be reviewed until a complete and compliant file is submitted.**

ASSESSMENT DATE AND VALUATION DATE

- **Per Indiana Code 6-1.1-2-1.5 (amended by Section 3 of Senate Enrolled Act [SEA] 420-2014), the assessment and valuation date are both January 1, 2016.** All real property should reflect characteristics as of this date.
- Depreciation should also be applied relative to **January 1, 2016**, and updated on an annual basis. If an adjustment is necessary, and depreciation has not been updated as part of the annual adjustment process, the adjustment factor may need to be revised to take into account increased depreciation from the 2012 General Reassessment. Since normal (physical) depreciation refers to the normal wear and tear of an improvement, generally there would be an increase in depreciation even if the cost changes were insignificant. Even if the sales (market data) indicates there was no additional change within the market, the neighborhood (market) factor adjustment would account for this. Hence, counties should apply depreciation by accounting for the additional age of the improvement.
- **Note: The cost tables were updated for the March 1, 2015 assessment date (see <http://www.in.gov/dlgf/2489.htm>) and all improvements should be assessed with the updated cost schedules. Cost tables will not be updated for the January 1, 2016 assessment date. Please note, the Location Cost Multipliers (LCM) have been updated for the January 1, 2016 assessment date (see <http://www.in.gov/dlgf/files/pdf/151123> - Wood Memo - Updated Location Cost Modifiers for the 2015 Annual Adjustment.pdf and <http://www.in.gov/dlgf/files/pdf/151123> - Wood Memo - ATTACHEMENT 1 Updated Location Cost Modifiers for the 2015 Annual Adjustment.pdf).**

PARCEL CHARACTERISTICS

All properties must be assessed based on their characteristics as of January 1, 2016.

RATIO STUDY REVIEW STANDARDS

The Department will review all ratio studies for the 2016 annual adjustment according to the guidelines set forth in the 2007 *IAAO Standard on Ratio Studies*. The 2016 ratio study review process is unchanged from the Department's guidance on sales review and ratio study analysis for 2011 – see [http://www.in.gov/dlgf/files/110111 - Wood Memo - 2011 Ratio Study Review Process and Annual Adjustment Guidance.pdf](http://www.in.gov/dlgf/files/110111_-_Wood_Memo_-_2011_Ratio_Study_Review_Process_and_Annual_Adjustment_Guidance.pdf).

Sales Window:

The assessing official must use sales of properties from the period of time **from January 1, 2015 to December 31, 2015** for the January 1, 2016 assessment date. Note: This is a departure from prior years that used fourteen (14) months of sales. A longer time period may be required to produce a representative sample in some counties; however, no more than five years of sales may be used in the ratio study. Older sales must be time-adjusted, if appropriate and in accordance with methods prescribed in the 2007 *IAAO Standard on Ratio Studies*.

Multiple Sales Years:

Similar to the 2015 assessment process, counties may use sales older than one year in one township without expanding the sales window for other townships. However, time adjustments for older sales must be performed using all comparable older sales, including those sales whose inclusion in the ratio study is not necessary because of sufficient current sales. This will promote equity among townships with different sales windows without requiring the addition of older sales in townships where they are not needed for assessment purposes.

For example, Adams Township has sufficient 2015 sales, but Boone Township does not. The sales window is expanded to 2014 sales for Boone Township. The county does not need to expand the sales window to 2014 sales for Adams Township. However, the county should use comparable 2014 and 2015 sales from both Adams and Boone Townships to determine whether a time adjustment is necessary for the 2014 sales used in Boone Township.

Sales Chasing:

Appendix D of the 2007 *IAAO Standard on Ratio Studies* lists four methods that oversight agencies may use to detect sales chasing. Of these, the Department primarily uses the Mann-Whitney test outlined in D.1: Comparison of Average Value Changes. In *Mass Appraisal of Real Property*, Robert Gloudemans notes that:

When calculating average value changes, new parcels and parcels that have undergone a change in use or physical change (such as additions or renovations) should be excluded (pp. 311 – 312).

Because 2014 marked the first phase of the cyclical reassessment, and 2015 marked the second phase of the cyclical reassessment, it may be difficult to discern between changes attributable to the reassessment process and changes attributable to sales chasing (hence the need for the additional column in the Workbook to designate whether a parcel was reassessed in the second phase of the cyclical reassessment). The Mann-Whitney test will be utilized for the 2016 annual adjustment process for detecting sales chasing. However, parcels that were part of the second phase of the cyclical reassessment (as identified in the Workbook) will be excluded from analysis. Additionally, the Department may use other methods described in Appendix D to detect sales chasing.

II. Ratio Study Format

The ratio study format is fully described in the attached example. The format itself is unchanged from 2015.

As in prior years, ratio studies must be submitted in a spreadsheet compatible with Microsoft Excel 2007. The spreadsheet must contain one tab with ratio study data for each of the following types of property:

- Industrial Vacant
- Industrial Improved
- Commercial Vacant
- Commercial Improved
- Residential Vacant
- Residential Improved

In addition, the study should contain a *Summary* tab detailing the number of sales used and ratio statistics in each section of the ratio study.

For the 2016 annual adjustment, all ratio studies submitted to the Department must also include two additional tabs. The first tab is called *Formatted*. This tab must contain the ratio study data located in the other six tabs in a format readable by the SPSS software program. This formatting can be done in Excel or another program. **Note: The SPSS software program is not needed to produce the formatting.**

Because of the way the SPSS software reads the data, only one parcel from a multi-parcel sale can be included in the *Formatted* tab. To fix this, the ratio study should also include a second tab called *MultiParcelSales*. This tab will list all the data for each parcel in each multi-parcel sale included in the *Formatted* tab.

Adding these tabs will make the review process more efficient and should result in a faster approval time. In 2015, the average approval time for a ratio study (after data compliancy and a

complete file was submitted) was 8.52 days. While calculating ratio statistics by hand is time-consuming, a software program like SPSS can perform these calculations very quickly. Listing multi-parcel sales in a separate tab will also make it easier to reconcile the sales used in the ratio study with the sales disclosure data reviewed by the Data Division.

The ratio study format is described in detail in the attached document.

III. Summary Tables

As part of the ratio study review process, the Department reviews the assessed value change by class of property and township, and on an overall (county) basis. In those situations where the assessed value either increases or decreases by more than ten percent (10%) from the previous year, the Department will request an explanation for the variance. In an effort to provide as much information as possible about the assessed values in each county, the Department expects to post the Summary Tables and the explanations for the variances on its website.

Questions about this memorandum may be directed to Barry Wood, Assessment Division Director, at bwood@dlgf.in.gov or (317) 232-3762, or Deliverance Bougie, Senior Statistician/Application System Analyst, at dbougie@dlgf.in.gov or (317) 234-5861.