Tax Year 2012 Real Estate Appraisal Ratio Report

May 9, 2012

Overview

The Division of Property Assessments has statutory responsibility for conducting appraisal ratio studies in all counties in Tennessee at least once every two years. The division coordinates all phases of the study including data collection by assessors, sales data review by division field personnel, and analysis.

Included in this report are:

- Forty-two (42) counties with appraisal ratio studies.
- Three (3) current value update counties.
- Ten (10) counties that completed reappraisal programs.
- Forty (40) counties did not require action this year due to previous year revaluation or ratio activity.

Purpose of Ratio Studies

Ratio studies are conducted primarily to determine the overall level of appraisal within each assessing jurisdiction in the state. Other uses include but are not limited to the following:

- As a disclosure of full value of taxable property as one index of community fiscal ability.
- As an aid in the development of reliable measurement standards that use taxable valuations as a base (e.g. tax relief).
- As a guide for equalization by state and local assessing agencies.
- As an indication of non-uniformity in assessment to permit equitable distribution of taxes in taxing districts identified with more than one assessing area.
- As a method of disclosing the degree of non-uniformity of assessment among and within classes of taxable property.

Use of Ratio Studies

Assessing personnel use ratios in a variety of ways, including but not limited to the following:

To identify potential problems with appraisal procedures.

To provide for a current value update between reappraisals.

To adjust sale prices for time.

To develop depreciation schedules.

To test reappraisal results.

The Comptroller of the Treasury, Division of Property Assessments (DPA) uses ratios:

To estimate the effective tax rate for each jurisdiction in order to calculate the amount of tax relief payments for qualified applicants.

The State Board of Equalization uses the ratios:

To equalize centrally assessed properties with locally assessed properties.

To equalize values as determined through the appeal process.

To equalize personal property with real property values.

To equalize tax rates in cities that lie in more than one county.

The state local education agencies use ratios:

To equalize the assessed values in each county for use in the education funding formula.

Municipally owned electric and gas systems use ratios:

To equalize tax rates for calculating the payments in lieu of tax payments in the jurisdictions they serve.

Basic Principle of Sales Ratio

Measuring the Difference between *Appraised Value* and *Market Value*

On the **appraisal date,** January 1 of the year of reappraisal, these values, market and appraised, should be similar.

As time passes between reappraisals the disparity between these values may increase.

This disparity is what creates an assessment ratio or sales ratio.

The **appraised value divided by the sale price** produces the sales ratio.

$$\frac{\text{Appraised Value}}{\text{Sales Price}} = \text{Sales Ratio}$$

Ratio Study Procedures and Considerations

DATA COLLECTION AND VERIFICATION OF SALES

Accurate and complete property sales information is critical in order to properly measure the relationship of sales prices to appraised values in a jurisdiction. The assessor of property in each county performed sales data collection and verification for use in the ratio study in accordance with the Property Assessor's Procedures For Sales Data Collection and Verification: DPA, 2003. The Division of Property Assessments monitored to insure the collection and verification of sales information was accomplished within acceptable standards of accuracy and completeness. The monitoring focused on the following:

Completeness of the Sales File:

To evaluate the completeness of the sales file, DPA personnel conducted a deed inventory of all recorded property sales in the county. The results were then compared to the property records of the assessor to insure that all transfers are properly reflected.

Farm and Commercial / Industrial Sales:

Sales with farm and commercial/industrial classifications are required to have a verification form completed on each sale. DPA staff reviewed these records for compliance and the resulting qualification determinations.

Acceptance or Rejection of Warranty Deeds:

Although only valid 2011 transfers of real property that met the statutory standard for an arm's length transaction between a willing buyer and willing seller were used to compute the sales ratio, all warranty deeds were analyzed. If a deed was disqualified, the reason for rejection was entered and verified. Common situations for disqualification included sales to family members, sales that contained personal property items, forced sales, etc.. A complete list of accept and reject codes and explanations can be found in the Property Assessor's Procedures For Sales Data Collection and Verification: DPA, 2003.

DATA ANALYSIS

Once the data was collected and monitored, the analysis phase of the ratio study began. A ratio for each sale was calculated by dividing the previous year appraised value by the sale price.

Outlier and Standard Deviation Trims

Accepted sales having an appraised value to sale price ratio of less than twenty percent (20%) or greater than five hundred percent (500%) were excluded as obvious data errors. At this point, the arithmetic mean and standard deviation were computed, and trim points of two standard deviations from the mean were established. Sales falling outside those trim points were also set aside.

Representativeness of Data

The ratio study in general is only valid to the extent that the sales used are representative of the population. Optimal representativeness is achieved when: (1) appraisal procedures used to value the sales parcels are similar to procedures used to value the corresponding populations, and (2) sale properties are not unduly concentrated in certain areas or types of property whose appraisal levels differ from the general level of appraisal in the population.

In addition to the major classifications of real property (residential, commercial/industrial and farm), each study was further stratified into groupings such as Area or Neighborhood, City, Land Type/ Total Land Units, Improvement Type, Effective Year Built, Month of Sale. These groupings were analyzed and compared to insure that no strata was over represented in the study which would unduly influence the overall results. If strata were discovered to be unduly represented, a random selection of sales within the strata was removed leaving a more representative number of sales for that group.

Estimating Unsold Property Performance

An important objective of the ratio study was to determine appraisal performance for the entire population of properties. As long as both sold and unsold properties are appraised in the same manner, statistics calculated in the ratio study can be used to infer appraisal performance for unsold parcels. In order to insure that sold and unsold properties were appraised in the same manner, the **split sample** technique was employed in each of the appraisal ratio counties and current value update counties.

Split Sample Technique

The split sample technique splits the sales file into two parts: (1) sales with value changes made after the date of sale and (2) sales with no value change after the sale date. If the ratios and statistics for each split study were significantly different or if there were an extraordinary number of changes made to the file after the date of the sale, the overall study results are not valid. The recommended corrective action for this situation is to use the appraised value at the time of sale and exclude all sales with new construction, split-offs, and other significant changes to the property characteristics.

FINAL ANALYSIS

Once the sales package was analyzed for completeness, verification, representativeness, and possible sales chasing, a final report was computed. The final report included the computation of the number of observations, arithmetic mean, median, weighted mean, coefficient of variation (COV), coefficient of dispersion about the median (COD), and the price-related-differential (PRD). A histogram showing the distribution of the ratios was also produced. This report was comprised of two parts: (1) the initial report which presents statistics for locally assessed property, and (2) a report with a proportionate number of observations added with ratios of 1.0000 to represent centrally assessed properties.

DISTRIBUTION OF RESULTS

Upon approval of the final report by the division director, a letter transmitting the results was sent to the Assessor of Property, Trustee, County Mayor, and City Recorders of affected cities and towns within the county, Executive Secretary, State Board of Equalization and the appropriate division personnel. The division retained a copy of the final reports and letters.

CURRENT VALUE UPDATE COUNTIES

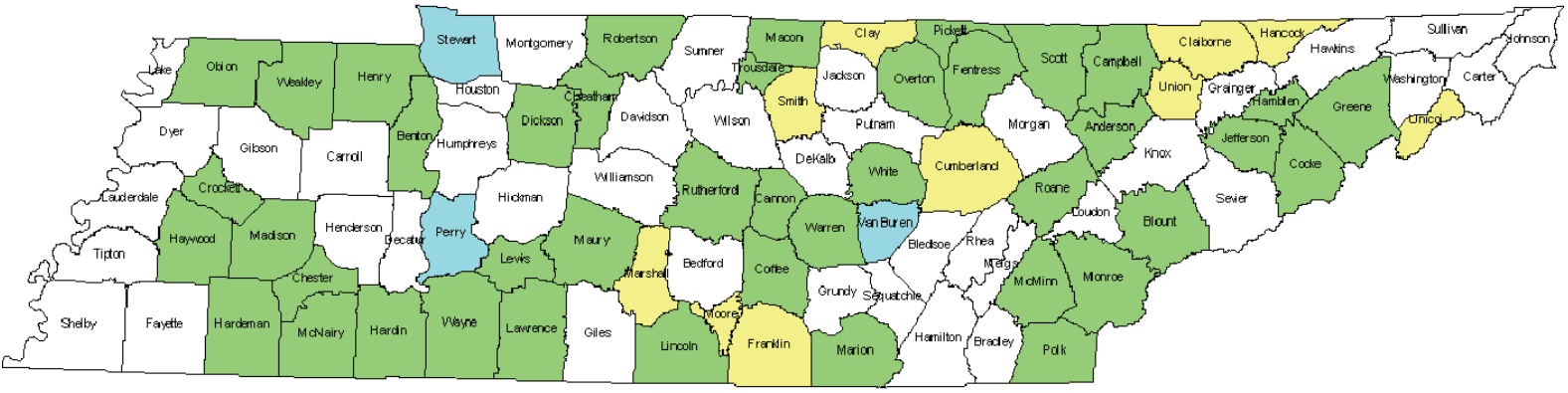
Counties in Tennessee are on either a 4,5, or 6 year cycle for reappraisal. In the third year of a six-year reappraisal cycle a ratio study is performed to determine the overall level of appraisal for the jurisdiction. If the results of that ratio study reflect an overall median ratio of less than ninety percent (90%) of fair market value, all properties in the county are updated to market value. If any subclass of property does not have a level of appraisal within ten percent (10%) of the overall level of appraisal for the jurisdiction, the subclass is updated to the overall level. There were three (3) counties scheduled for a current value update this year, all of which had median ratios of more than ninety percent (90%), therefore requiring no update.

2012 Overall Median Ratios for All Assessed Real Property by County

COUNTY	2012 RATIO	COUNTY	2012 RATIO	COUNTY	2012 RATIO	COUNTY	2012 RATIO
ANDERSON	1.0110*	FENTRESS	1.0036*	LAUDERDALE	1.0000	ROANE	1.0265*
BEDFORD	1.0000	FRANKLIN	1.0000	LAWRENCE	1.0148*	ROBERTSON	1.0088*
BENTON	1.0000	GIBSON	0.9951	LEWIS	0.9983	RUTHERFORD	1.0113*
BLEDSOE	1.0000	GILES	1.0000	LINCOLN	1.0109*	SCOTT	1.0836*
BLOUNT	1.0000	GRAINGER	1.0000	LOUDON	1.0113*	SEQUATCHIE	1.0000
BRADLEY	0.9961	GREENE	1.0975*	McMINN	1.0417*	SEVIER	1.0000
CAMPBELL	1.0194*	GRUNDY	0.9980	McNAIRY	1.0368*	SHELBY	1.0458*
CANNON	1.0719*	HAMBLEN	1.1043*	MACON	1.0293*	SMITH	1.0000
CARROLL	1.0000	HAMILTON	1.0098*	MADISON	1.0334*	STEWART	0.9949
CARTER	1.0000	HANCOCK	1.0000	MARION	1.0424*	SULLIVAN	0.9412
CHEATHAM	0.9859	HARDEMAN	0.9738	MARSHALL	1.0000	SUMNER	1.0400*
CHESTER	0.9935	HARDIN	0.9739	MAURY	1.0536*	TIPTON	1.0102*
CLAIBORNE	1.0000	HAWKINS	1.0000	MEIGS	1.0000	TROUSDALE	1.0892*
CLAY	1.0000	HAYWOOD	1.0016*	MONROE	1.1458*	UNICOI	1.0000
COCKE	1.0557*	HENDERSON	1.0000	MONTGOMERY	0.9754	UNION	1.0000
COFFEE	0.9918	HENRY	0.9955	MOORE	1.0000	VAN BUREN	1.0156*
CROCKETT	0.9500	HICKMAN	1.0156*	MORGAN	1.0000	WARREN	1.0000
CUMBERLAND	1.0000	HOUSTON	1.0000	OBION	1.0000	WASHINGTON	1.0292*
DAVIDSON	0.9982	HUMPHREYS	1.0000	OVERTON	0.9864	WAYNE	0.9800
DECATUR	0.9730	JACKSON	1.0000	PERRY	1.0982*	WEAKLEY	0.9885
DEKALB	1.0000	JEFFERSON	1.0089*	PICKETT	1.0000	WHITE	1.0309*
DICKSON	1.0020*	JOHNSON	1.0000	POLK	1.0895*	WILLIAMSON	1.0000
DYER	1.0062*	KNOX	0.9977	PUTNAM	1.0000	WILSON	1.0000
FAYETTE	1.0693*	LAKE	1.0000	RHEA	1.0053*		

2012 Ratio Study County (42) 2012 Reappraisal County (10) 2012 CVU County (3)

*Counties with an overall median ratio greater than 1.0000 will use a factor of 1.0000 to equalize locally assessed tangible personal property or centrally assessed public utility property.



Non-Shaded Counties required no action due to either a countywide revaluation or ratio study having been performed in 2011.

Statutory Provisions and Responsibilities Relative to Ratio Studies in Tennessee

Tennessee Code Annotated (TCA)

67-5-1604. Appraisal ratio studies.

(a) The **division of property assessments** shall conduct appraisal ratio studies in all counties of the state in such manner and at such time as shall be determined by the **state board of equalization**.

(b) The purpose of these studies shall be to assist **the board** through the **division of property assessments** to effect the assessment of all property throughout the state in accordance with the constitution and laws of Tennessee.

(c) Based upon these studies and other pertinent information which may be available, the **division of property assessments**, with approval of the **state board of equalization**, shall develop a plan and proceed to carry out the reappraisal and equalization programs in each county of the state.

67-5-1605. Periodic appraisal ratio studies required.

(a) The **state board of equalization** has the responsibility to determine whether or not property within each county of the state has been valued and assessed in accordance with the constitution and laws of Tennessee.

(b) (1) In order to assist **the board** in its determination, the **division of property assessments** shall conduct appraisal ratio studies in all counties of the state at least every two (2) years unless otherwise determined by the board.

(2) Such studies shall determine applicable ratios by dividing the appraised values of property as shown on the official assessment records by the qualified selling prices of such properties.

(3) If a sufficient number of qualified sales do not exist for a subclass of property in a jurisdiction, appraisals of representative properties in that subclass may be used to supplement any existing sales in determining the ratios required by this section and 67-5-1606.

(4) These appraisal ratio studies and any other pertinent information which may be available shall be used by **the board** to determine whether or not the property in each county has been assessed by the assessor of property as required by the constitution and laws of the state.

67-5-1606. Annual overall ratio of appraisal Ratios for classifications Public utility property.

(a) Based upon the appraisal ratio studies and other pertinent information, the **state board of equalization** shall annually determine the overall ratio of appraisal for property in each county of the state.

(b) In addition, **the board** may also determine ratios for the respective classifications of property for each county.

(c) The **state board of equalization** shall each year certify to the **comptroller of the treasury** appraisal levels, as are determined by **the board** for each county, to be used by the commission for purposes of computing the assessments of public utility properties.

For more information contact:

Division of Property Assessments
Suite 1400, James K. Polk State Office Building
505 Deaderick Street
Nashville, TN 37243-1402
(615) 401-7737 Main Office
(615) 741-3888 Fax

Additional information available on the internet @

http://www.tn.gov/comptroller/sb/

or

http://www.tn.gov/comptroller/pa/

Comptroller of the Treasury, Division of Property Assessments. Authorization No. 307133, 50 copies, May 9, 2012.
This public document was promulgated at a cost of $.92 per copy.