



NORTH DAKOTA SALES RATIO STUDY AND EQUALIZATION ACTIONS OF THE STATE BOARD OF EQUALIZATION

Sales Ratio Study

Taxable real property is generally classified as residential, commercial, or agricultural. All taxable real property in the state is to be assessed at its “true and full value.” True and full value for agricultural property is the earning or productive capacity of the land. For residential and commercial property the true and full value is generally the market value. A sales ratio study is conducted annually by the Property Tax Division of the Office of State Tax Commissioner to examine the relationship between assessed value and market value for residential and commercial property. The market value is determined by examining actual arms-length transactions. Through the sales ratio study, the values established through sales transactions are compared to the assessed values for those properties.

For residential and commercial classes of property in all 53 counties and the 12 largest cities, a minimum sample size has been established to provide a statistical sampling of property sales. The minimum sample size is the lesser of:

- 30 sales for each class of property, or
- 10 percent of the total number of properties in each class.

If an adequate number of sales did not occur in the taxing district during the study year, sales from the three prior years may be included in the study. If the inclusion of prior years does not result in a sufficient number of sales, current appraisals are used to supplement the sales data. In larger taxing districts where the number of sales exceeds the minimum sample size, all sales are considered in the sales ratio analysis. For the 2016 sales ratio study, nearly 12,000 observations were made comparing the relationship between the assessed value and either the sale price or the appraisal value.

For each sale in the sample, the sales value to assessed value (SV/AV) percentage is calculated comparing the assessed value to the sale price or appraised value. All percentages are ordered from lowest to highest and the median, or middle, value is determined. The median percentage of the SV/AV ratios is used to calculate the assessed value to market value (AV/MV) percentage. The AV/MV percentage becomes the basis for equalization action by the State Board of Equalization (SBOE).

Page 1 of the attached table shows an example of a SV/AV median calculation; page 2 shows the 3 steps in the AV/MV value percentage calculation:

1. The prior year assessed value of all property in a given class is divided by the SV/AV median percentage for that property class to arrive at an estimate of total market value.
2. The current year assessed value is reduced by the total value of new property not taxable in the prior year. The resulting amount is divided by the estimate of total market value (from calculation #1) to arrive at an AV/MV percentage.
3. The AV/MV percentage (from calculation #2) is then compared to the tolerance level established by the SBOE to determine the extent to which assessed value is equalized with market value.

State Board of Equalization (SBOE) Use of Sales Ratio Study Data

The SBOE has recognized that, in practice, assessment values will not be exactly equal to market value in all cases. The SBOE has established, for the 2017 tax year, a policy that the AV/MV percentage should be within a tolerance range of 90% to 100%. This indicates that assessments, on average, are within 10% of the estimated market value for the prior tax year, but do not exceed 100% of market value.

In the attached example the taxing jurisdiction has a median SV/AV ratio percentage of 91.5% and an AV/MV percentage of 92.7%. If the AV/MV calculation had resulted in a percentage below 90%, the SBOE would likely have taken action to increase the assessments for that classification of property. Past practice of the SBOE has been to increase assessments for a given class of property by the percentage necessary to reach an AV/MV percentage of 93%. This practice reflects the fact that within a given classification there are likely properties already assessed at or close to 100% of market value and others assessed well below market value. SBOE actions to equalize assessments based on the sales ratio study are required by law to be across the board for a given class of property. The practice of increasing assessments to raise the AV/MV percentage to 93% limits the potential for over valuation of properties that are already fairly valued. On the other hand, the fact that the AV/MV percentage is below 90% warrants an adjustment to somewhere well within the tolerance range due to the fact that many properties are likely valued well below the appropriate market value in that taxing district.

North Dakota Century Code Section 57-13-04.1 provides that in equalizing assessments, the SBOE may not approve a valuation in which the true and full value for residential and commercial property in the taxing district exceeds the true and full value as determined by the sales ratio study. SBOE practice has been to round fractional percentages to the nearest whole percentage (percentage calculations of less than .5% are rounded down and percentage calculations greater than or equal to .5% are rounded up). Section 57-13-04, provides that the percentage of reduction or increase made by the SBOE to equalize assessments must be a whole percentage and not a fractional amount.

In districts where disparity exists between the true and full value and the assessed value for a single class of property, equalization action by the SBOE ensures that owners of a given class of property do not bear a disproportionate share of the district's tax burden. For example, if agricultural properties are appropriately assessed at 100% of true and full value, but residential and commercial properties are only assessed at 85% of true and full value, the tax burden will be disproportionately shifted from the residential and commercial properties to the agricultural properties within the taxing district. A taxing district budget is converted to a mill rate based on the total taxable value of property in the district. That mill rate is then applied to all property in the district. Owners of properties in an undervalued classification bear a disproportionately low share of the tax burden; owners of other properties bear a disproportionately high share of the tax burden.



SAMPLE SALES VALUE TO MARKET VALUE PERCENTAGE CALCULATION

1. Market Value Estimate Calculation

Prior Year Market Value Estimate = Prior assessed value / sales value to assessed value median percentage

Example:

- a. Tax year 2016 assessed value recorded by county = \$110,500,000
- b. Median sales value to assessed value percentage as calculated in previous example = 91.5%
- c. Tax year 2016 market value estimate = \$120,765,027

Calculation: $\$120,765,027 = \$110,500,000 / 91.5\%$

2. Assessed Value to Market Value Percentage Calculation

Assessed Value to Market Value % = Current Year Assessed Value of Property Taxable in Prior Year / Prior Year Market Value Estimate

Example:

- a. Tax year 2017 assessed value recorded by county = \$114,000,000
- b. Tax year 2017 new property not taxable in prior year = \$2,000,000
- c. Tax year 2017 assessed value of property taxable in prior year (a - b) = \$112,000,000
- d. Tax year 2016 market value estimate as calculated in #1 = \$120,765,027
- e. Tax year 2017 market value ratio percentage = 92.7%

Calculation: $92.7\% = \$112,000,000 / \$120,765,027$

3. Assessed Value to Market Value Percentage Comparison to SBOE Tolerance Level

Lower Tolerance % Limit < or = Assessed Value to Market Value Percentage < or = Upper Tolerance % Limit

Example:

- a. Lower tolerance % limit = 90%
- b. Upper tolerance % limit = 100%
- c. Market value ratio percentage from #2 = 92.7%

Calculation: $90\% < 92.7\% < 100\%$

Sample Sales and Assessment Ratio Calculation

	Sale Price	Assessed Value	Percentage
1	182,000	135,000	74.2%
2	175,000	135,000	77.1%
3	182,000	145,000	79.7%
4	146,000	125,000	85.6%
5	198,000	170,000	85.9%
6	198,000	170,000	85.9%
7	185,000	160,000	86.5%
8	185,000	160,000	86.5%
9	166,000	145,000	87.3%
10	210,000	185,000	88.1%
11	136,000	120,000	88.2%
12	151,000	135,000	89.4%
13	162,000	145,000	89.5%
14	150,000	135,000	90.0%
15	142,000	130,000	91.5%
16	142,000	130,000	91.5% ← Median %
17	195,500	180,000	92.1%
18	146,000	135,000	92.5%
19	151,000	140,000	92.7%
20	194,000	180,000	92.8%
21	210,000	195,000	92.9%
22	150,000	140,000	93.3%
23	171,000	160,000	93.6%
24	171,000	160,000	93.6%
25	160,000	150,000	93.8%
26	175,000	165,000	94.3%
27	194,000	185,000	95.4%
28	136,000	130,000	95.6%
29	166,000	160,000	96.4%
30	195,500	190,000	97.2%
31	162,000	160,000	98.8%