

# Section 1—Introduction

Each year county assessors develop a new assessment and tax roll. From one year to the next, the major change between rolls is the property values. Change is the one constant in the value of real estate. Changes may be gradual and not easily noticed, or changes may occur rapidly in an active market. Because property values are always changing, assessors must update the **real market value** (RMV) to keep them current. The process for measuring these changes is called the ratio study. The assessor is required to create a ratio study annually, per ORS 309.200.

Both state and local county assessment agencies use ratio studies to:

- Monitor appraisal performance.
- To determine the need for a general revaluation.
- Establish priorities for revaluation of selected groups of properties.
- Identify potential problems with appraisal procedures.
- Conduct market analyses.
- Adjust appraised values between revaluations.

The assessor's ratio study compares the current certified roll RMV with the current market. Specifically, dividing the RMV by the sales price creates a ratio. Sales ratios show the percentage relationship between the RMV and the sales price. In the study, the ratio selected to represent the market area is referred to as the level of RMV, and it measures the degree to which the RMV reflects the current market.

The data used to calculate the relationship between RMV and the market are also used to calculate the uniformity and equity of the RMV estimates between properties. Uniformity and equity are measured by applying statistical formulae to sales ratios.

The ratio study is used to measure RMV levels and identify the amount of adjustment required to maintain RMV at 100 percent. This study is also used to measure the quality of appraisal programs. Dispersion and uniformity measurements are used to study how well appraisals are tracking with the variations in the market.

Recent changes in property tax laws increased the need for ratio analysis as an appraisal program management tool. To track program performance and analyze market trends, assessors, data analysts, and appraiser/analysts rely on market area analysis, and historical data, and RMV measurements such as: coefficient of dispersion (COD), coefficient of variation (COV), and price related differential (PRD). The Department of Revenue also relies on the certified ratio study to review the counties' valuation programs for results and to determine

the health of the statewide valuation system. Assessors and data analysts use the ratio study to develop an annual valuation plan to manage their annual appraisal programs.

The assessor is responsible for all aspects of the ratio study and adjustment program. This includes organizing the program, ensuring that adequate staff is provided, resolving policy questions, conducting an ongoing review during the sales year, and certifying the completed study. The department reviews the assessors' programs and data to verify standards are met.

Adequate staff is essential to ensure sales collection and confirmation are up to date and that **both** the ratio study and adjustment program are completed in a timely manner.

The assessor is responsible for preparing the ratio study. In smaller counties, the assessor may fulfill the tasks of preparing the ratio study. In larger counties, a data analyst is assigned to perform the various duties related to sales collection and analysis. This person should have a strong knowledge of statistics and the ability to communicate effectively with the assessor, chief appraiser, support staff, data processing staff, and Department of Revenue staff. The data analyst works closely with each person providing periodic updates on the study's progress, giving direction as needed, and identifying program objectives.

When necessary, additional support staff should be assigned:

- For deed (sales) take-off;
- To generate sales confirmation letters;
- To complete the sales records; and
- To input data.

The data analyst should periodically review the support staff's work to ensure correct procedures are being followed.

All counties have automated systems to store, sort, and retrieve data. The assessor must ensure that the computer system meets the needs of the ratio and adjustment programs.

## Statutes and administrative rules relating to ratio studies

Following are brief synopses of sections of the ORS and Oregon Administrative Rules (OAR) pertaining to ratio studies:

- **ORS 192.430(1)** requires the assessor to provide reasonable access and facilities for the public to examine any assessment or taxation public records.
- **ORS 306.115** Provides for general supervision of property tax system; correction of assessment roll.
- **ORS 306.120(1)(2)** requires a continuing study with the object of uniformity, equalizing property values within and between counties for the purpose of assessment and taxation.
- **ORS 306.125(1)** requires counties to organize assessment and taxation data in standardized format. See OAR 150-306.125 and 150-306.125(1).
- **ORS 308.205** defines **real market value**.
- **ORS 308.215** Provides that the contents of the assessment roll include **real market value** and property classification. See OAR 150-308.215(1)-(A).
- **ORS 308.232** requires all property to be valued at 100 percent of **real market value**.
- **ORS 308.234** Provides for a record of last appraisal; Department of Revenue to approve methods of appraisal; COD Standards. See OAR 150-308.234
- **ORS 309.200** requires the assessor to collect sales data and prepare a ratio study; and file a copy of the certified ratio study with the clerk of the board of property tax appeals (BOPTA) and the Department of Revenue. See OAR 150-309.200-(A), OAR 150-309.200(B), and OAR 150-309.200(C). **Note:** The ability to create extra copies should be ensured so that others needing the report can be provided a copy.
- **ORS 309.203** requires the Department of Revenue to examine the ratio study and give written recommendations or orders to assessors.
- **ORS 309.203(2)(a)** requires the Department of Revenue to order adjustment if the real market value level of all taxable properties deviates more than 5 percent from the real market level required by ORS 308.232.
- **ORS 309.203(2)(b)** requires the Department of Revenue to order a change if the real market value for any class of property deviates more than 10 percent from 100 percent of real market value.

## Basic steps to complete a ratio study

1. Collect sales for the time period January 1 through December 31. **(See sections 1–4 of this manual.)**
2. Verify sales for analysis. **(See section 5 of this manual.)**
3. Provide the sales database, including all rejected sales, to the Department of Revenue, if requested, under its supervisory responsibility and authority (ORS 306.115).
4. Create a sales file containing only qualified, usable sales.
5. Check outlier ratios for needed additional analysis before inclusion in the array. **(See section 5 of this manual.)**
6. Conduct a sales time-trend analysis by month and/or by quarter to determine if time adjustments are needed. **(See section 6 of this manual.)**
7. If a time trend is needed, trend each sale to the target assessment date. **(See section 6 of this manual.)**
8. Analyze each array, noting arrays that may need supplemental studies (e.g., multi-years, similar class combined, etc.). **(See section 7 of this manual.)**
9. Prepare and assemble the ratio study report. **(See section 10 of this manual.)**
10. File copies of the certified ratio study report with the Department of Revenue no later than July 1 per OAR 150.309.200(C).
11. The Department of Revenue will analyze each study and submit a letter of findings and recommendations to each assessor per ORS 309.203(2).
12. A certified copy of the assessor’s ratio study report must be filed with the county clerk as per ORS 309.200(2) no later than October 15.

This manual will guide the data analyst and other users through the sales ratio analysis process, the study procedures required, and the documenting and reporting of those processes and procedures.