



Office of Property Assessment

Mass Appraisal Valuation

Methodology Summary

Tax Year 2025

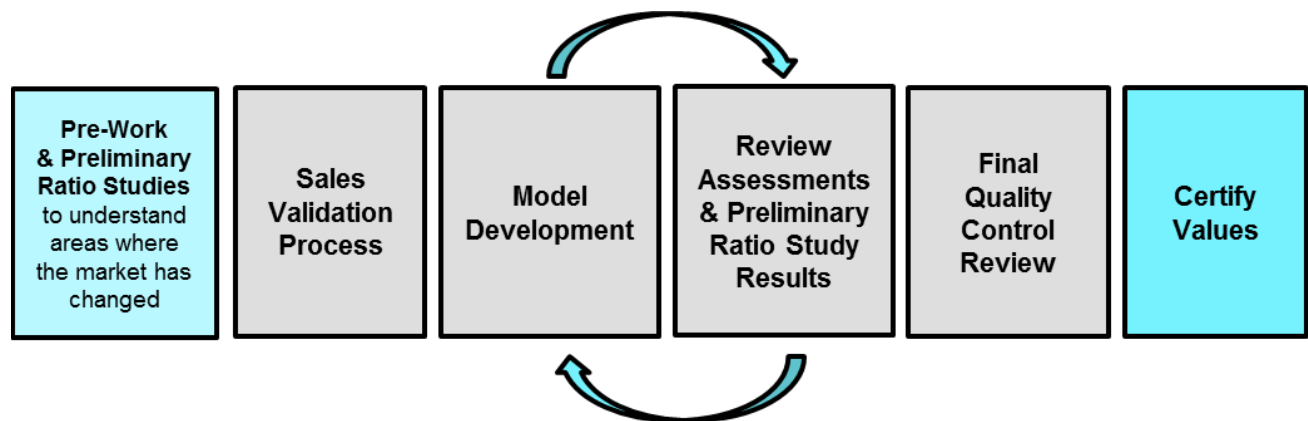
Released September 2024

Introduction

For Tax Year 2025, the Office of Property Assessment (OPA) determined the value of more than 580,000 residential, commercial, industrial, and institutional properties in Philadelphia, through mass appraisal valuation. The term tax year refers to the calendar year in which taxes are due. The effective date of the new assessment is January 1, 2025, with property taxes due on March 31, 2025. The goal of any valuation approach is to ensure that property assessments reflect current market conditions through the period being valued and OPA aims to achieve the most accurate, uniform, and equitable assessments possible.

As part of the revaluation process, OPA uses ratio studies to measure how citywide assessments compare to industry standards using standard performance measures that measure the accuracy and uniformity of assessments, and equity between lower and higher value properties. **Both internal and external ratio studies showed that the TY25 revaluation met industry standards and improved the equity, uniformity, and accuracy of single-family property valuations citywide.** Both the internal and external ratio study are posted online at phila.gov/opa.

Key Phases of the 2025 Assessment Process



Sales Validation

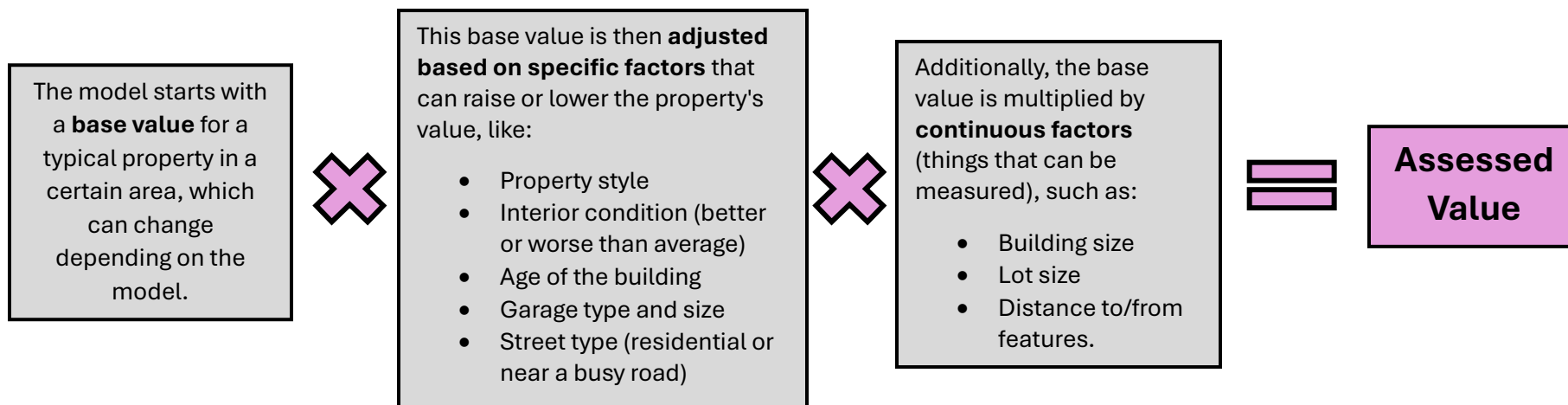
Sales validation is a crucial step in the property assessment process, as it ensures that the data used to build valuation models is accurate. For the TY25 revaluation, OPA looked at property sales data from January 2018 to June 2023. OPA focuses on "arm's length" sales, which are transactions where the buyer and seller act independently without any special relationship, ensuring the sale price reflects the true market value. Sales that aren't typical, like those between family members or those with unclear prices, are excluded because they don't reflect real market value. Although OPA aims to be as accurate as possible in assessments, assessments will always lag the current market due to the requirement that OPA certify its values in the spring of the year prior to the tax year for which those values take effect.

Model Development for Mass Appraisal Valuation

Mass appraisal is the process OPA uses to estimate property values across Philadelphia. Mass appraisal is a common process used by major cities across the U.S. This involves analyzing sales data, property characteristics, and market trends using models like Multiple Regression Analysis (MRA). Using regression analysis, OPA creates an index for each model to adjust sales from any period to match the effective date of appraisal. This way, OPA can factor out time-related changes in the final model.

A typical model includes important variables like property style, size, age, lot size, and location within specific Geographic Market Areas (GMAs) to account for local market differences. GMAs are sub-markets determined by real estate activity where similar properties sell for similar prices. While the models can use physical characteristics like square footage or garage space, OPA cannot consider factors such as the owner's income, ethnicity, or neighborhood crime rates, as it is illegal for OPA to adjust property values based on these demographics. This approach allows OPA to estimate property values fairly and efficiently across large numbers of properties. OPA is required under state law to calculate the “contributory value of land,” or how much of the total property value is attributed to the land (72 Pa. Stat. Ann. § 5341.7). OPA also allocates value between the land and the building, usually using an 80%/20% split, with 20% for the land and 80% for the structure.

An example of a basic model is included below:



Review of Assessments and Preliminary Ratio Studies

After OPA calculates property values using models, evaluation staff review the results. OPA focuses on values that seem unusually high or low. If a property's value looks out of line with similar properties nearby, staff can manually adjust it to make it more accurate without changing the entire model. This helps ensure that each property's value is fair and consistent with others in the area.

OPA examines several measures to evaluate the quality of assessments during the modeling process and upon final certification of values to the state. OPA conducts sales ratio studies to evaluate assessment quality and uniformity, and to serve as a guide for further improvement in future projects. Sales ratio studies look at the following:

- Median Ratio:** Median Ratio measures how closely assessments compare to actual sales prices. The industry standard is 0.90 to 1.10 (90% to 110%). However, OPA targets a median ratio of between 0.95 to 1.02 (95% to 102%), with the goal of ensuring the highest possible accuracy in the City’s assessments.
- Coefficient of Dispersion (COD):** The COD is the most common measure of uniformity for assessments. This measures the average deviation of all ratios from the median ratio (less than 15% is considered within industry standards for jurisdictions like Philadelphia).
- Price Related Differential (PRD):** PRD measures equity in high versus low valued properties, or assessment progressivity or regressivity. Assessments are considered progressive if high-value properties are relatively over-appraised, and regressive if high-value properties are under-appraised relative to low-value properties. Values between 0.98 and 1.03 are considered within industry standards.

An external ratio study on Philadelphia’s TY2025 revaluation, conducted by Keene Mass Appraisal Consulting, found that the Coefficient of Dispersion (COD), Median Ratio, and the Price Related Differential (PRD) were within recommended ranges citywide for single family properties.

Ratio Statistics for FVR.Final_MV/TASP			
Group	Median Ratio	COD	PRD
R	0.991	11.5%	1.014
S	0.99	7.8%	1.009
T	0.997	8.6%	1.011
Overall	0.992	10.8%	1.013

Key	
T	Twins
R	Rows
S	Singles
FinalMV	Final Market Value
TASP	Time Adjusted Sale Price

Source: RATIO STUDY REPORT – CITY OF PHILADELPHIA, JULY 2024 by Keene Mass Appraisal Consulting

State Tax Equalization Board

Each year, OPA submits its property values to the State Tax Equalization Board (STEB), which compares them to actual sales data to check the accuracy of assessments. STEB then publishes a percentage called the Common Level Ratio (CLR) to show how close these values are to the real market value. In 2023, Philadelphia's CLR was 92.61%, meaning the City's assessments were within the state's acceptable range of 15% from 100%. If assessments are off by more than 15%, the CLR is used to adjust values during appeals after the Board of Assessment Appeals/Revisions establishes a fair market value, based on evidence, to calculate a revised assessment value. Prior to the Actual Value Initiative (AVI) in 2013, Philadelphia's CLR was outside of the state's acceptable range of 15% of 100%. Under AVI, the City reassessed every property in Philadelphia to ensure that assessments accurately reflect market value and that similar properties are valued at the same level. More details can be found on STEB's website, <https://dced.pa.gov/local-government/boards-committees/tax-equalization-division/>