



LINCOLN INSTITUTE
OF LAND POLICY

Valuation Methods and Tax Equity

Issues and Challenges

July 7, 2020 | RON RAKOW and PAUL BIDANSET | LINCOLN INSTITUTE OF LAND POLICY

Rationale of Mass Valuation

- An effective property tax system requires assessments that are **accurate, efficient, and objective**.
- Mass Valuation Systems meet these requirements:
 - **Accurate** – a well calibrated system with quality data will produce values that consistently reflect market value.
 - **Efficient** – assessments can be produced in less time at a lower cost per parcel than more traditional, manual approaches.
 - Enables more frequent revaluations that keep assessments at the market.
 - Market adjustments that apply to many similar properties can be accomplished through a simple table entry.
 - **Objective** – assessments are based on **market derived** formulas and valuation standards that are **consistently applied** to generate assessments (in contrast with individual appraisers).

Politics of Mass Valuation

- What do political leaders want?
 - a reliable, efficient revenue source that raises the least issues with taxpayers (no hissing while plucking).
- What do taxpayers want?
 - satisfaction that the amount they are paying in taxes is consistent with what similar properties are paying (i.e., nobody is getting special treatment)
 - stability in tax levels – no big changes
- Mass Valuation Systems are best suited to meet both these needs
 - Objective - consistent application of valuation standards that ensure assessments reflect the market.
 - Efficient - administrative costs are low thus enabling more frequent valuation cycles to keep taxes proportional to property value.



“The art of taxation consists in so plucking the goose as to get the most feathers with the least hissing.”

- Jean-Baptist Colbert

Fair & Equitable Property Taxation

- Why does it matter for property tax systems to be fair and equitable?
 - Government accountability and transparency
 - Inequities are costly:
 - ✓ increase costs for governments (time, court, consultants, appeals, etc.)
 - ✓ increase costs for community (undue tax burdens, increases in rent, time, legal fees, etc.)
 - ✓ impacts public participation (payments)
 - ✓ impacts on elected and appointed government officials
- Many governments are even required by law or regulation to meet acceptability thresholds with respect to property tax equity statistics.

Mass Valuation/Assessment Lifecycle

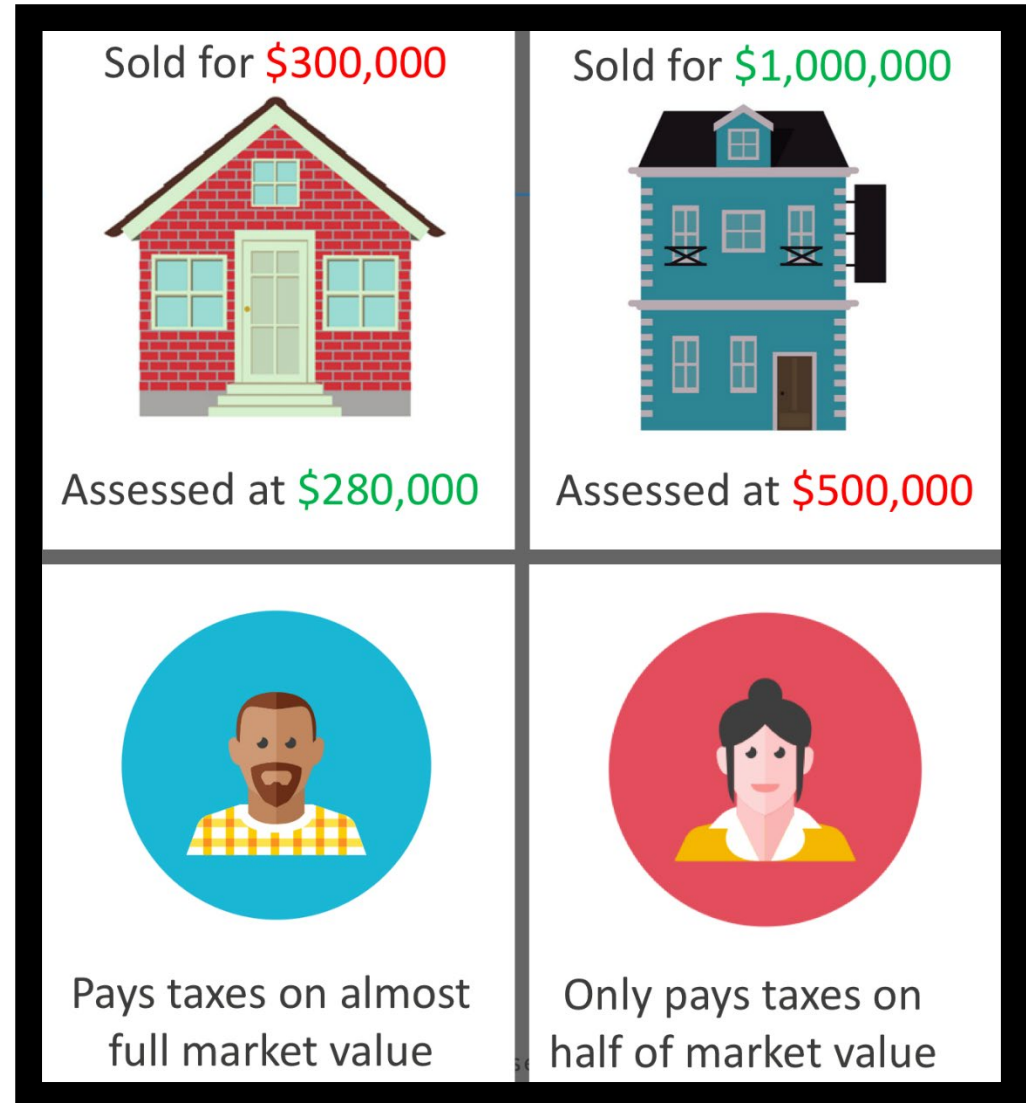
- Identify scope: What is to be valued, using which approach?
- Collect relevant market data (boots-on-the-ground, open data sources, GIS, etc.)
- Inspect data for completeness, representativeness, and accuracy
- Create and calibrate valuation models
- Test values for uniformity and equity
- Declare (or “stamp”) values as of a given date
- Monitor for deviations of assessed values from market values (inequity)

Quality Control – Sales Ratio Studies

- “Sales ratio studies”
- Used to evaluate property tax assessments with respect to accuracy, uniformity, and equity
- Among other things, helps the government answer the following:
 - How did we do with respect to fairness and equity?
 - Did we over-value or under-value any particular property types or locations?
 - Is everyone paying their “fair share” of the property tax?
 - If not, where do the inequities lie?
- Analysts use ratio studies to uncover clues (patterns) in order to diagnose (and hopefully cure) inequity

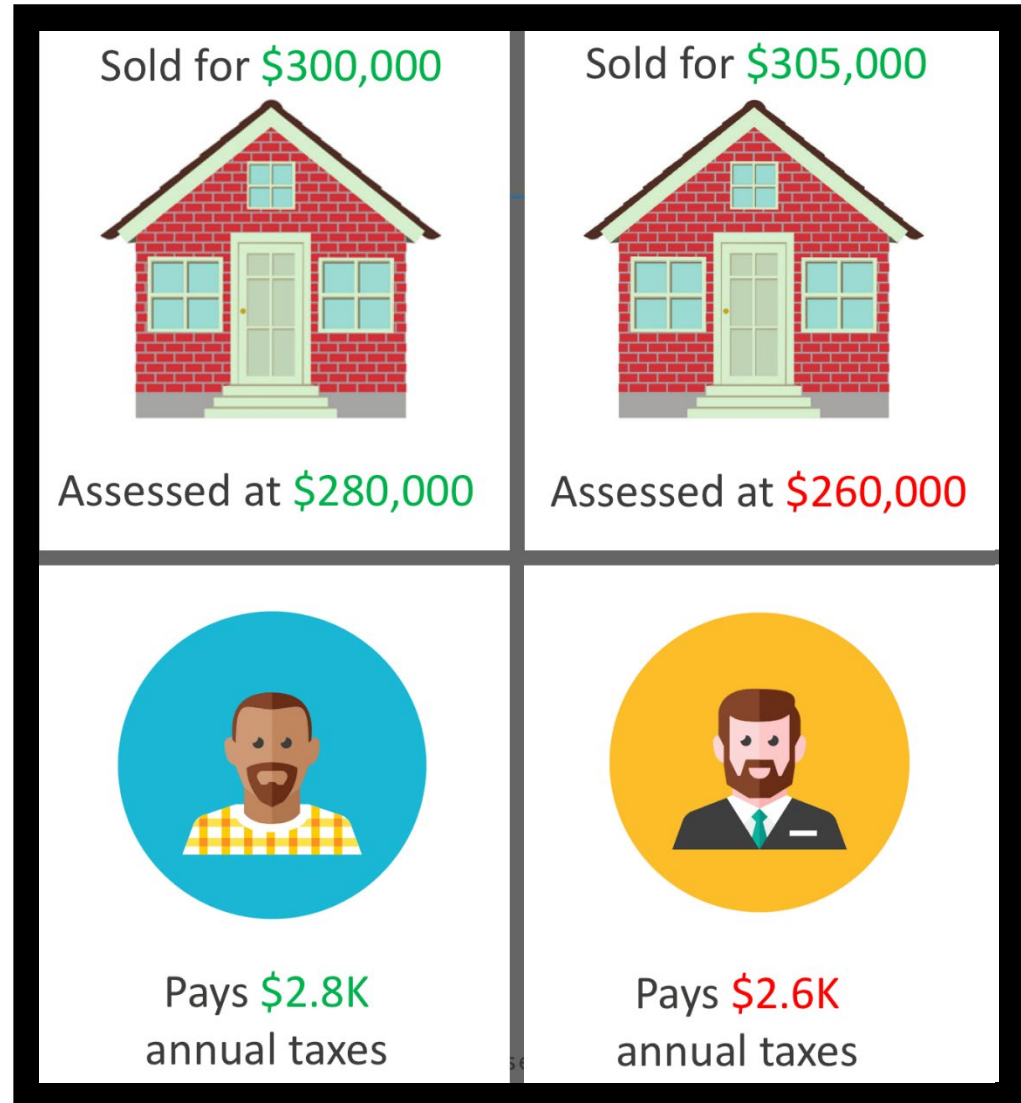
Vertical Inequity

- Occurs when assessed levels of market value (or “ratios”) are correlated with value.
- Regressive vertical inequity
 - Ratios decrease as value increases
 - “tax discount” higher for more expensive properties
- Progressive vertical inequity
 - Ratios increase as value increase
 - “tax discount” higher for lower-priced properties

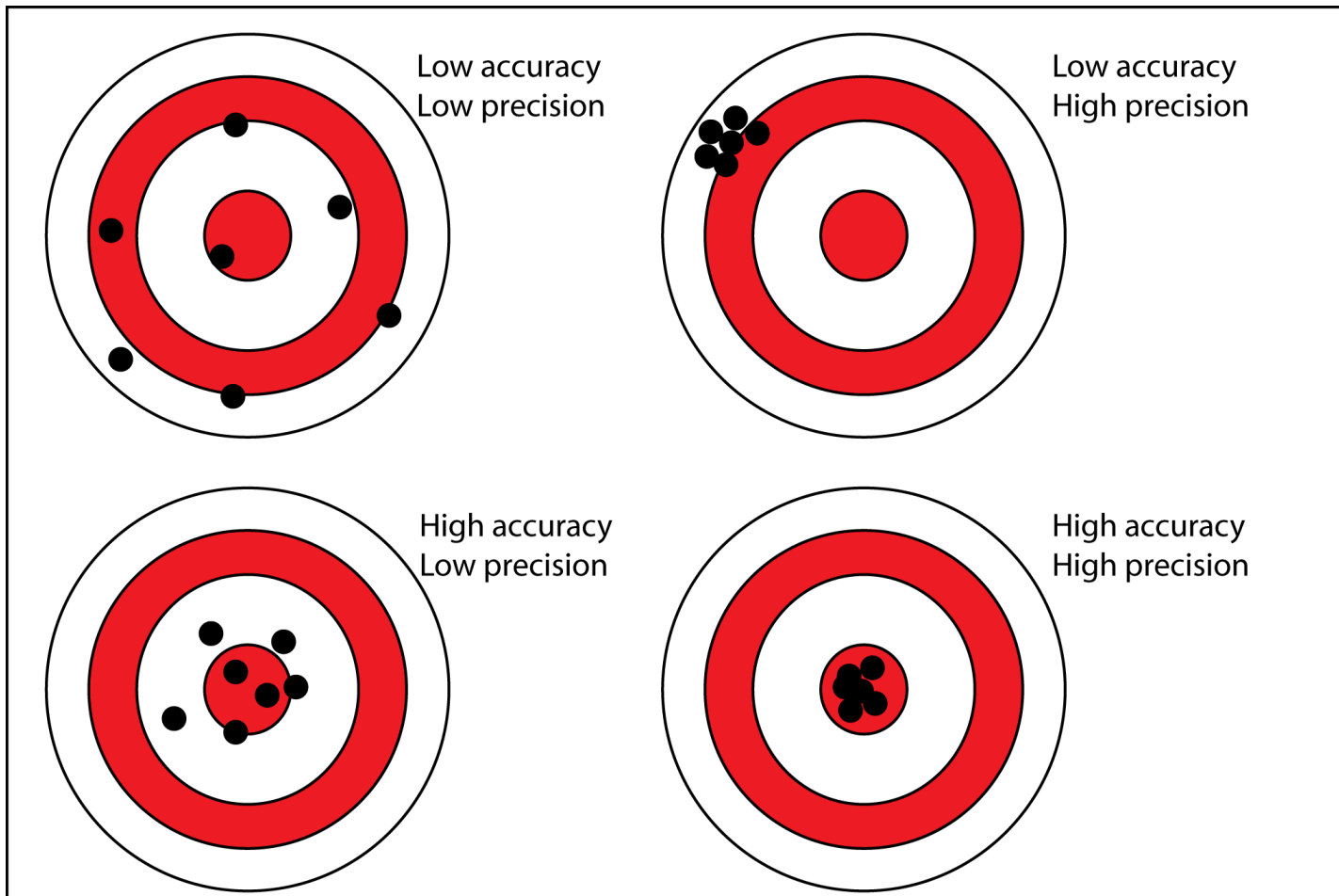


Horizontal Inequity

- Occurs when assessed levels of market value (or “ratios”) are not consistent:
 - across similar properties
 - across classifications (i.e., broken down by property type, year built, neighborhood, etc.)



Valuation Uniformity



Promoting Objectivity in Mass Appraisal

International standards: recommended best practices for both tax policy and methodology/application

- International Association of Assessing Officers (IAAO)
 - Standards on Tax Policy, Mass Appraisal, Ratio Studies, etc.
 - Global Guidance on Mass Appraisal and Related Tax Policy
- Royal Institute of Chartered Surveyors (RICS)
 - Red Book Global Standards
- The European Group of Valuers' Associations (TEGoVA)
 - European Valuation Standards (Blue Book)
- International Valuation Standards (IVSC)

Fit-for-Purpose Property Tax Practices

Important to first consider realistic constraints:

- Financial – what is the budget?
- Technological – what software is available?
- Temporal – what is the timeline?
- Geographic – which locations are to be included ?
- Legal – are there any laws that may affect operations?
- Social – are there any customary considerations that may affect operations?
- Other

Valuation Lifecycle

- Identify scope: What is to be valued, using which approach?
- Collect relevant market data (boots-on-the-ground, open data sources, GIS, etc.)
- Inspect data for completeness, representativeness, and accuracy
- Create and calibrate valuation models
- Test values for uniformity and equity
- Declare (or “stamp”) values as of a given date
- Monitor for deviations of assessed values from market values (inequity)

Elements of an Effective Market Value-Based Property Tax System

- Supportive underlying economic, legal, and administrative frameworks
- Accurate property characteristics and market data
- Skilled valuers
- Effective valuation models
- Quality assurance
- Effective management
- Sufficient resources
- Transparency
- Appeals mechanisms



Source: IAAO Guidance on International Mass Appraisal and Related Tax Policy

Frequency of Reappraisal

- Assessed values deteriorate over time as markets change and evolve
- Frequent revaluations maintain fairness in the distribution of tax
- Annual assessment programs are the gold standard
 - This does not require that every assessment be changed every year. Assessments need to be changed only when:
 - ✓ a property has changed physically;
 - ✓ when there is a clear indication based on market evidence that valuations no longer meet level and uniformity standards.
 - If valuation models are not updated annually, adjust values by property type and location based on sales ratio or related analyses
- All properties should be revalued at least every 4–6 years (IAAO).
- Revaluation may need to be more frequent when indicated by worsening statistical quality measures developed from ratio studies.

Property Tax Administrative Budget Considerations

Data maintenance programs are an efficient way to keep assessments accurate

- Verify sales and the associated property data
 - Accurate sale data improves model accuracy
 - Sale properties are often improved/renovated prior to sale
- Inspect properties when they change (i.e., constructed, renovated, demolished, damaged, etc.)
- Use data quality and ratio studies to identify properties/data elements that may require data recollection
- Periodic reinspection of properties that have not been visited on a regular cycle (i.e., every 10 years)

Budget Issues (continued)

Strategic Technology Investment Can Reduce Costs

- CAMA systems
Beyond the basics, new CAMA functions incorporate workflows, spatial data, and support new data collection methods and entry.
- Automated Valuation Models
AVMs can provide a high level of accuracy and efficiency in the calculation of market values
- GIS and related data collection technologies
Incorporates location into valuation process, and new AI techniques can also automate data collection from aerial and street-level imagery

Thank you

RON RAKOW

LINCOLN INSTITUTE OF LAND POLICY

rrakow@lincolninst.edu

PAUL BIDANSET

DOCTORAL FELLOW – LINCOLN INSTITUTE OF LAND POLICY

VALUATION RESEARCH PROJECT MANAGER – INTERNATIONAL ASSOCIATION OF ASSESSING OFFICERS

bidanset@iaao.org



LINCOLN INSTITUTE
OF LAND POLICY