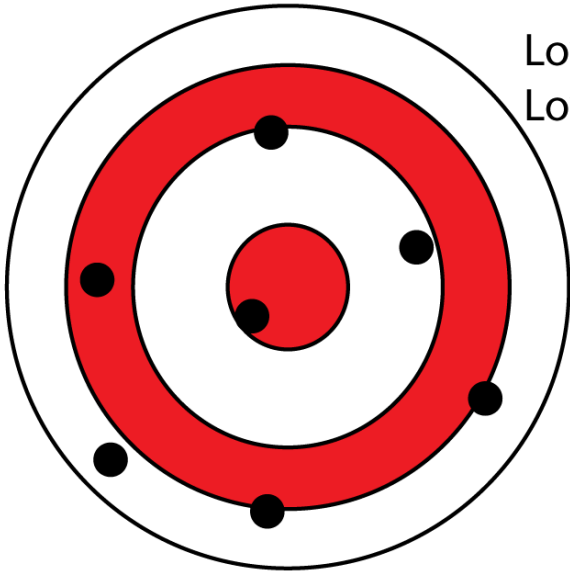




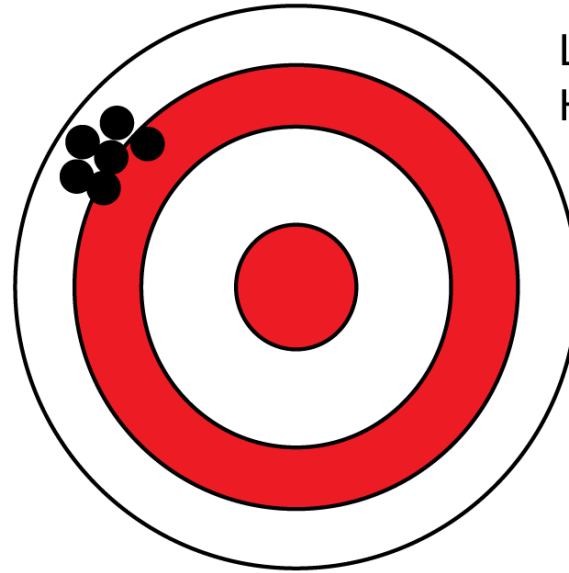
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Valuation Result Verification

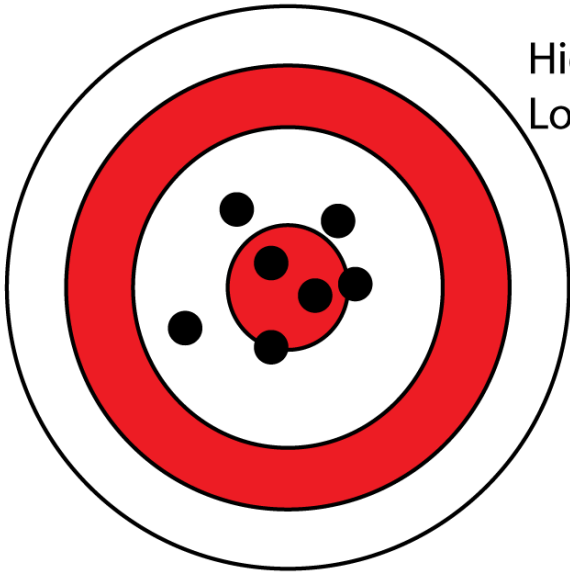
Ratio Studies: Valuation Quality Control



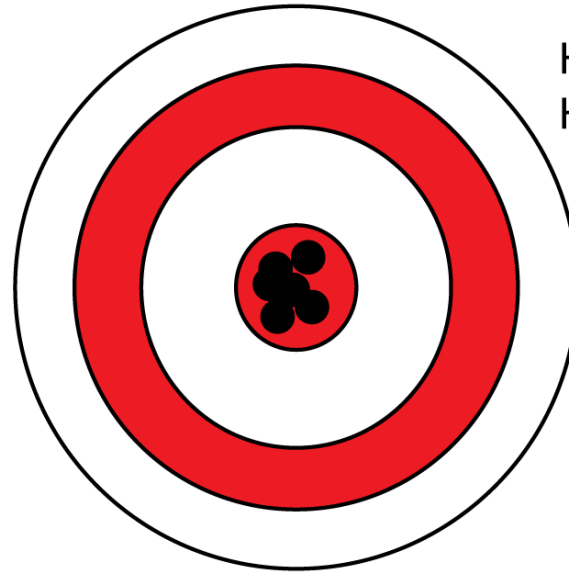
Low accuracy
Low precision



Low accuracy
High precision



High accuracy
Low precision



High accuracy
High precision

Assessment-to-Sale Price Ratio (ASR)

To calculate:

Divide valuation by sale price

- Ratio > 1 = overvalued
- Ratio < 1 = undervalued

Listen to them. They are
telling you something (and
they have a lot to get off their
chest!)

Ratios Are Your Friends



Example

Ratio = Assessment / sale price

Say ratios of a neighborhood are trending downward (assessments are *lower* relative to market value). What is this telling us?

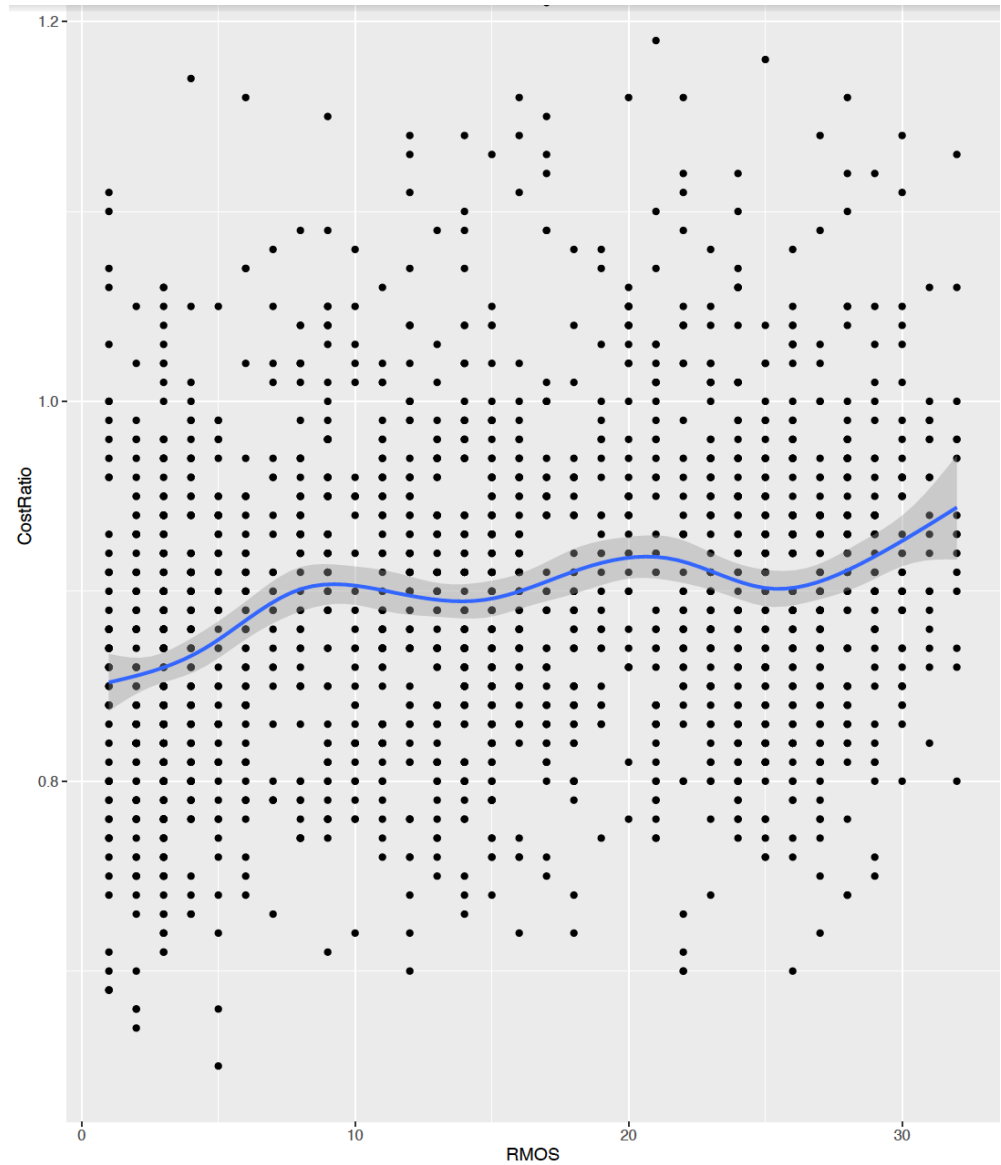
→ Markets are *appreciating*

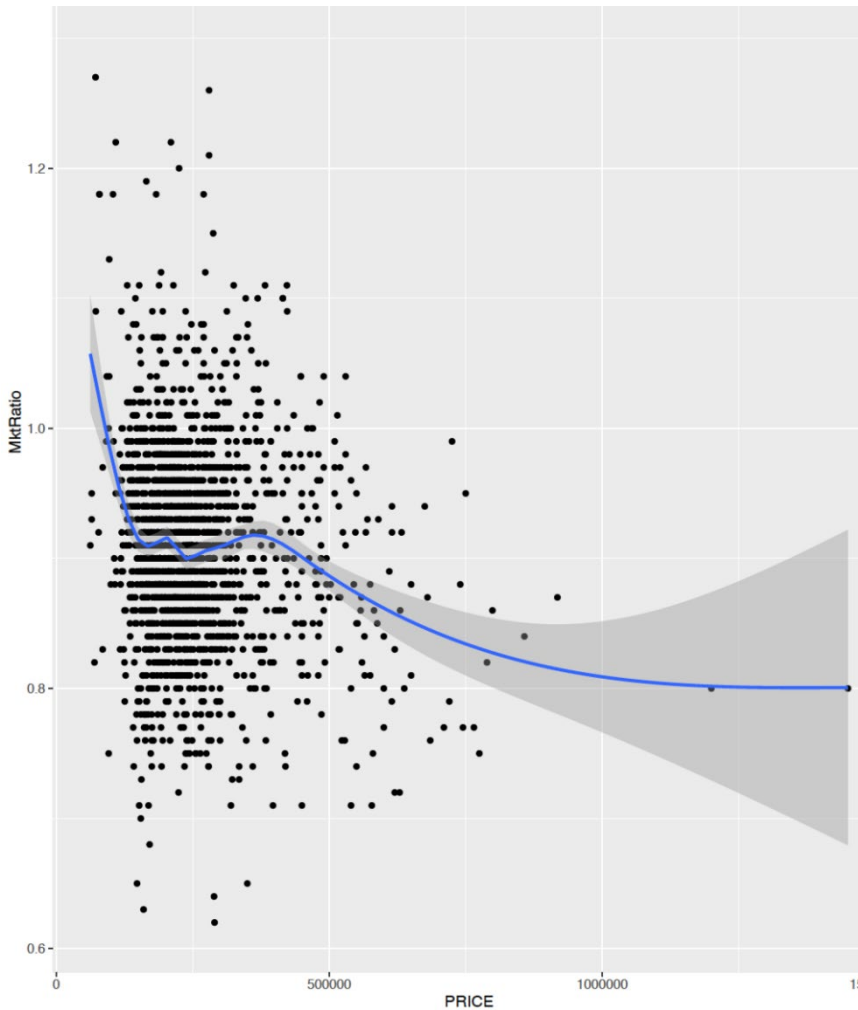
What if ratios are trending upward (assessments are *higher* relative to market value): What is this telling us?

→ Markets are *depreciating*

Can one market appreciate while another depreciates? (hint: yes).
Therefore, important to look at ratios at a granular, local level (GIS!)

Reverse Month of Sale





Vertical Equity

- Are ratios approximately similar, regardless of price?
- Typically, are lower-priced properties valued at the same level (ASR) as middle-priced and upper-priced properties?
- Vertical → moving UP the price ladder, from low to high
- Equity → equal treatment
- Trend = evidence of vertical inequity
- **Types of inequity**
- Regressivity → higher-priced properties have lower ASRs than lower-priced
- Progressivity → lower-priced properties have lower ASRs than higher-priced

Vertical Inequity

Sold for \$300,000



Assessed at \$280,000

Sold for \$1,000,000



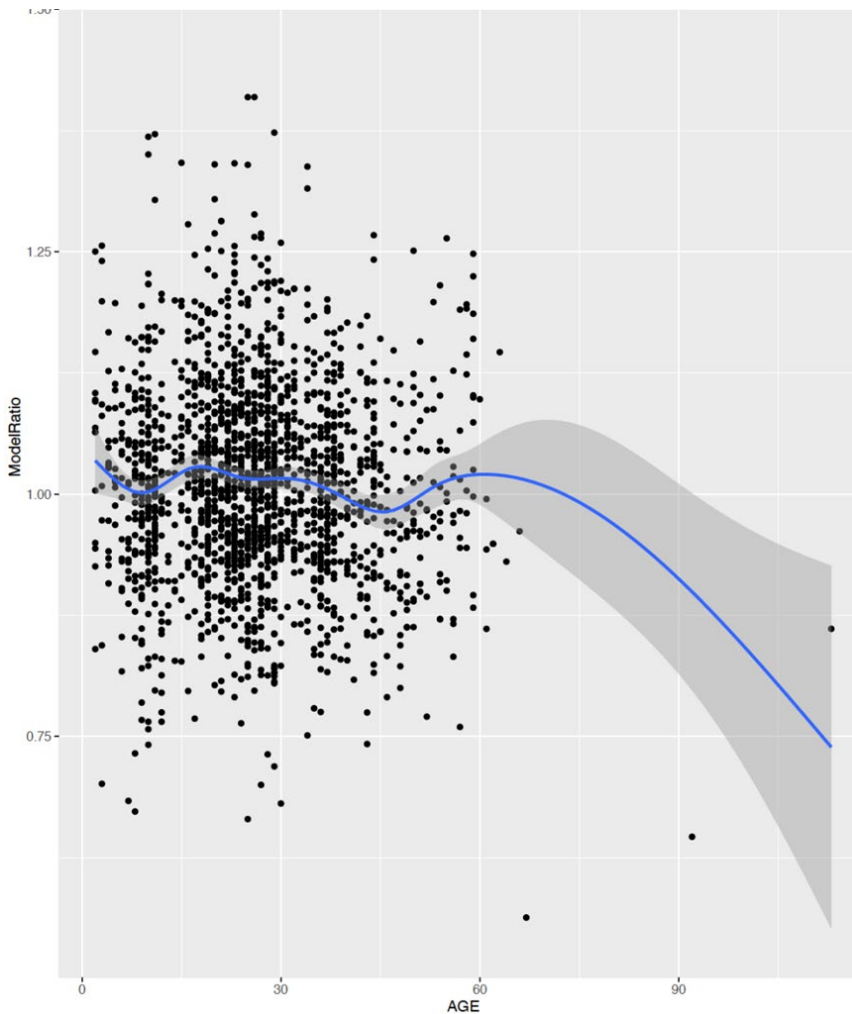
Assessed at \$500,000



Pays taxes on almost
full market value



Only pays taxes on
half of market value



Horizontal Equity

- Are ratios approximately similar, regardless of stratum?
- Also, are ratios the same for similar properties?
- Horizontal → moving across categories (e.g. property types, age, architectural styles, locations)
- Equity → equal treatment
- Trend = evidence of horizontal inequity

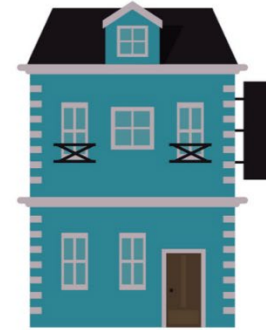
Horizontal Inequity

Sold for **\$300,000**



Assessed at **\$280,000**

Sold for **\$1,000,000**



Assessed at **\$500,000**



Pays taxes on almost
full market value

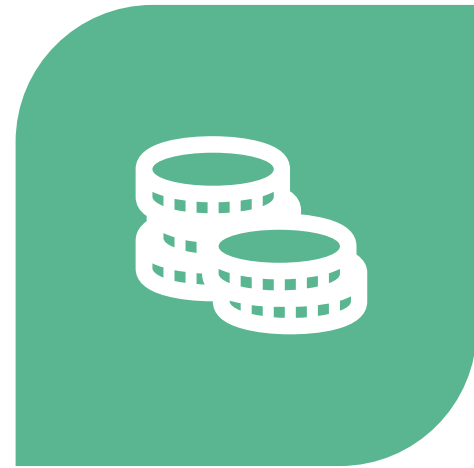


Only pays taxes on
half of market value

Horizontal vs. Vertical Inequity



DOES ONE CAUSE
THE OTHER?



TWO SIDES OF THE
SAME COIN?

Valuation Standards

- International Association of Assessing Officers
 - Standard on Ratio Studies
- Royal Institute of Chartered Surveyors (RICS)
 - Red Book
- The European Group of Valuers' Associations
 - Blue Book
- International Valuation Standards Council (IVSC)

Thank you

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