How to evaluate valuation models?

- Ruud M. Kathmann
- r.kathmann@waarderingskamer.nl
- Marco Kuijper
- m.kuijper@waarderingskamer.nl

Mass appraisal in the Netherlands

- Legal framework
- Multi purpose valuation
- Automated valuation models
- Quality control
- Sales ratio’s and mutual relations

Council for real estate assessment

- Task: quality control of mass valuation
- Involved parties
  - municipalities
  - polderboards
  - national revenue office
- Council board has 11 members
- Staff 20 persons

Legal framework

- Act for real estate assessment 1995
- Objectives
  - Uniformity, quality, efficiency, clarity
  - valuation for taxation purposes
- Activities
  - 458 municipalities responsible for appraisal
  - 8 million properties to be appraised
  - values used by national revenue office and (40) polderboards

Frequency of re-assessment

- From every four year
  - valuation 1995 used for taxation 1997-2000
  - revaluation 1999 for taxation 2001-2004
  - revaluation 2003 for taxation 2005-2006
- to yearly
  - revaluation 2005 for taxation 2007
  - revaluation 2007 for taxation 2008

Definition of value of real estate

- Real market value
  - the price that a reasonably acting buyer and a reasonably acting seller would agree on during a normal transaction with optimal preparation
- Residential property
  - value based on comparable sales
- Non-residential property: highest of:
  - market value (mostly based on rent prices)
  - reproduction costs
Purpose of mass appraisal

- From fiscal valuation
  - Municipal real estate tax
  - Real estate tax polderboards
  - Imputed income national revenue office
- To multipurpose valuation
  - Increasing use of assessed values
  - Part of system of official government data bases

Municipal real estate tax

- For residential property:
  - Only owner pays taxes
  - Tax rate (average) 0.2% of value
  - Tax for average house € 400
- For non-residential property:
  - Both owner and occupier taxed
  - Tax rate (average) 0.2% + 0.2%
- About 6% of financial means for municipality

Real estate tax polderboard

- Only for owner
- Only for built property
- Tax rate (average) 0.05% of value
- Same rate residential and non-residential
- Tax for average house € 100
- 100% of financial means from taxation

Central government until 2007

- Only use valuation for owner-occupied houses
- 0.6% of value is added to your income
- Tax for average house € 750
- But interest paid for mortgage can be deducted

Central government from 2007

- Valuation used for company tax
- Depreciation can be deducted from profit
- But no deduction beyond
  - 100% of value (if property is rented out)
  - 50% of value if property is used within the firm
- Limit for deduction generates € 2 billion

Non-fiscal use of assessed values

- Social housing
  - Regulations for maximum rent price
    - Regulations only apply for houses with a value lower than
      regional level
    - Maximum rent price based on size, quality and location
    - Location component will be based on "relative assessed value"
  - Use by social housing organizations
    - Rent price as fixed percentage of assessed value
    - Fixed percentage per complex or neighbourhood
Other use of assessed values

• Applications by the taxpayer
  – Financing
    • Banks allow assessed value as base for mortgage
    • Banks allow assessed value as base for interest reduction
  – Insurance
• Physical planning and public investments

How is mass appraisal done?

• Done by municipality or private firms
• Residential property
  – value based on comparable sales
• Non-residential property: highest of:
  – market value (mostly based on rent prices)
  – reproduction costs
• Valuation report available for taxpayer

Cost of appraisal and assessment

• More than 8 million properties to be valued
• Costs about € 160 million a year
  – about 40% administration and object characteristics
  – about 40% market analysis and valuation
  – about 20% appeal
• Total tax revenues about € 5 billion (2006)
• Cost 3% of revenues
• Cost € 20 per property a year

Computer assisted mass appraisal

• different types of models
  – availability of market data
  – type of property and comparability of property
  – market competition
• results of CAMA models
  – assessed value
  – valuation report

Valuation report

• Taxpayer receives valuation report
  – on paper
  – by internet
Types of valuation models

- systematic and direct comparison with other property (that has been sold recently)
  - statistical clusters
  - case based reasoning
- no models based on theoretical calculations (like MRA-models)
- model must be explainable in valuation report

Quality standards for mass appraisal

- International valuation standards
  - mass appraisal for taxation
- Special standards
  - legal framework (act and special regulations)
  - guidelines of the Council (Waarderingsinstructie)
  - standards on the CAMA models
  - standards on the valuation report

Role for valuation models

- the model
  - explains the difference between a new and old value;
  - gives consistent results when other recent sales are used;
  - explains the difference between the value and the sales price of that property;
  - makes clear the difference between the value of a property and the value of any other property;
  - will result in a logical value in case one of the characteristics of the property is changed.

Quality control

- Municipality checks quality
  - guidelines from Council of RE assessment
  - results reported to Council
- Check before value is formal
- Results of appeal are monitored
Guidelines for quality control

- Sales ratio analyse
  - all sales prices of residential property analysed
  - average ratio is analysed and reported
  - all individual ratio’s are analysed as well
  - simple to perform
- Conclusion
  - Assessed values are on market level
  - mutual relations not always correct

Quality control without sales price

- Three scenario’s
  - check the structure of the valuation model
  - very high demands on skills of people
  - check how model deals with hypothetical changes
  - risk of hypothetical value are made official
  - comparing pairs of objects

Extra guidelines quality control

- sales ratio analysis first
- selecting pairs of objects
  - comparisons that might be made by taxpayer
  - pairs for which mutual relation is changed
- comparing object withing a pair
  - is the ratio between objects as could be expected
  - is the difference in value explained by the valuation reports

Concluding remarks

- Quality control is not only a matter for the valuation experts
- Sales ratio analysis is very important, but not enough
- Selecting pairs of properties and comparing them is a simple and useful addition to sales ratio analysis

Thank you

- Any questions
  - now, or
  - r.kathmann@waarderingskamer.nl
  - m.kuijper@waarderingskamer.nl