Market Prices and user cost

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Inflation Measures:
Too High–Too Low–Internationally Comparable?
Paris, 21-22 June 2005
Two main approaches for owner occupied housing

- **Flow of service of owner occupied housing, production according to SNA definitions**
  - User cost (inputs into the production of the housing service, real interest rates, depreciation)
  - Rental equivalence (product, rent)

- **Net acquisition**
  - Built in excess of the housing that is depreciated.

- **Market price methods** used in the calculation of price changes, different methods for deciding on weights.
Market price approach; weights

- Weights decided in different ways.
  - User cost
    - Real interest rates and depreciation, sticky.
    - Base real estate value.
  - Rental equivalence
    - Market rent.
    - Consumers own valuation.
    - National account data.
  - Net acquisition
    - Housing treated as other durables in the CPI, capitalised.
Market price approach; price measurement

- Changes in market prices used for price measurement.
  - Rental equivalence, price changes in market rent.
  - Simple user cost, price changes of all properties sold old and new. Real interest rates influence the price.
  - Net acquisition, price changes of new or all properties sold, old and new. Interest rate do no influence.
Owner occupied housing

- **User cost:** Iceland (80), Ireland (78), United Kingdom (69), Canada (66), Finland (64) and Sweden (46).

- **Rental equivalence:** Norway (77), United States (68), Japan (60), Denmark (51), Netherlands (54), Germany (45), Switzerland (31).

- **Net acquisition:** United States until 1983, Australia (70), New Zealand (65), HICP from 2007.

- **Excluded:** Italy (78), Spain (81), Greece (74), Luxembourg (67), Portugal (66), Belgium (68), France (56) and Austria (57).
The simple user cost model

- **Imputed rent simple user cost:**
  - \((\text{real interest} + \text{depreciation}) \times \text{property value}\)

- **Calculated as an annuity, equal payments**

- **The annuity,**
  - covers both depreciation and interest
  - Both calculated from the same property value base

- **The property value price adjusted with house price index**
Real interest rate and depreciation

- The long term real interest rate combines.
  - Equity, over (50%), fixed real interest rate. 3% (as pensions funds)
  - Mortgage real variable interest rate weight as in sales contracts,
  - May 2005, twelve month moving average.

- Long term real interest rates.
  - Capital gain measured by the real interest rate.
  - Result the opportunity cost over the lifetime of the durable.

- Depreciation
  - 1.25% a year, on the average.
### Housing prices and rentals

<table>
<thead>
<tr>
<th>Year</th>
<th>Rent</th>
<th>Imputed rent</th>
<th>Market prices</th>
<th>imputed/rent</th>
<th>market/rent</th>
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</thead>
<tbody>
<tr>
<td>2001</td>
<td>9.0%</td>
<td>6.4%</td>
<td>6.4%</td>
<td>1.007</td>
<td>0.991</td>
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<tr>
<td>2002</td>
<td>8.7%</td>
<td>4.8%</td>
<td>4.8%</td>
<td>0.971</td>
<td>0.956</td>
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<tr>
<td>2003</td>
<td>9.9%</td>
<td>11.0%</td>
<td>11.7%</td>
<td>0.981</td>
<td>0.972</td>
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<tr>
<td>2004</td>
<td>7.9%</td>
<td>9.1%</td>
<td>10.5%</td>
<td>0.991</td>
<td>0.995</td>
</tr>
<tr>
<td>2005</td>
<td>5.8%</td>
<td>21.3%</td>
<td>29.3%</td>
<td>1.136</td>
<td>1.216</td>
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