What drives housing price dynamics: cross-country evidence

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Bank for International Settlements

EC workshop on housing and mortgage markets and the EU economy
Brussels, 21 November 2005
Housing finance and house price dynamics

Main question:
- Do the institutional characteristics of housing finance have an impact on house price dynamics?

Why do we care?
- Macro stability: Housing market affects the budget constraint of households and aggregate demand
- Financial stability: Banks are intimately involved in origination and holding of mortgages
Housing finance and house price dynamics

- **Methodology**: Exploit cross-country institutional diversity in a common empirical framework:
  - Explain house price dynamics by reference to a VAR (common specification)
  - Relate different dynamic patterns to aspects of the financing structures

Variables:
- Real GDP growth
- Inflation
- Short rate
- Term spread
- Bank credit
- House prices

Countries:
- BE, DK, FI, FR, DE, IE, IT, NL, NO, ES, SW, CH, GB
- CA, US
- AU, JP
SVAR framework

- Assumptions on the endogenous linkages among those variables (whether row variables respond to innovations in column variables)

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>Credit</th>
<th>HP</th>
<th>IR</th>
<th>Spread</th>
<th>Inflation</th>
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<td>No</td>
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<tr>
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<td>--</td>
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<td>Yes</td>
<td>Yes</td>
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<tr>
<td>HP</td>
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<td>Yes</td>
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<tr>
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<tr>
<td>Inflation</td>
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<td>Yes</td>
<td>No</td>
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</table>
Summary of results across all countries

- Variance decomposition of housing price movements (5 years)

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<th>Inflation</th>
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<tr>
<td></td>
<td>7.6</td>
<td>11.4</td>
<td>7.4</td>
<td>10.8</td>
<td>9.8</td>
<td>53.0</td>
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Housing financing structures

- Contract characteristics:
  - Fixed vs floating rate, maturity, refinancing, equity extraction
- Market:
  - Securitisation
- Prudential:
  - Loan-to-value, valuation of property
Three groups of countries

- **“Conservative”**: Dominance of fixed rate mortgages, no equity extraction, low LTV

- **“Aggressive Fixed”**: Dominance of fixed rate mortgages (five years or more), market valuations used, high LTV, equity extraction possible

- **“Aggressive Float”**: Dominance of floating rate mortgages, market valuations used, high LTV, equity extraction possible
### Three groups of countries

<table>
<thead>
<tr>
<th>Group</th>
<th>Countries</th>
<th>Mortgage rate</th>
<th>MEW</th>
<th>Maximum LTV</th>
<th>Valuation method</th>
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</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>BE, CA, FR, DE, IT, ES, CH</td>
<td>Mostly Fixed</td>
<td>No</td>
<td>Low</td>
<td>Mixed</td>
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<tr>
<td><strong>Group 2</strong></td>
<td>DK, FI, JP, NL, US</td>
<td>Mostly Fixed</td>
<td>Yes</td>
<td>Medium</td>
<td>Mixed</td>
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<tr>
<td><strong>Group 3</strong></td>
<td>AU, IE, NO, SE, UK</td>
<td>Variable</td>
<td>Yes</td>
<td>Very high</td>
<td>Market value</td>
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</table>
Recent house price growth strongest in Group 3
Inflation impact strongest in Group 1
Term structure effects

Short-term rates to housing prices

Interest rate spread to housing prices
Impulse response to a change in short rate
Two-way interaction with bank credit

Private sector credit to housing prices

Housing prices to private sector credit

Group 1
Group 2
Group 3
Summary

- House prices depend on inflation, the yield curve and bank credit, but national differences in the mortgage markets also matter.

- House prices are more sensitive to short-term rates when floating rate mortgage is prevalent.

- The feedback effect from house prices to bank credit is the strongest in those countries with more aggressive lending practices.